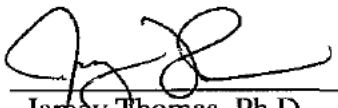
Petition for Tolerance

Tolerance Petition for use of Sulfoxaflor in/on Corn, field, Corn, sweet, Corn, pop, Sorghum, grain, Cacao, bean, Pineapple, Alfalfa, Clover and Processed Fractions

The undersigned, Jamey Thomas, Ph.D., Product Registration Manager with Dow AgroSciences LLC submits this petition pursuant to Section 408(d)(1) of the Federal Food, Drug and Cosmetic Act with respect to the pesticide chemical , in accordance to 40 CFR 180.7.

Attached hereto, in duplicate and constituting a part of this petition:

A. The name, chemical identity and composition of the pesticide chemical
B. The amount, frequency and time of application of the pesticide chemical
C. Full reports of investigations made with respect to the safety of the pesticide chemical
D. The results of tests on the amount of residue remaining, including a description of the analytical method used
E. Practicable methods for removing residue that exceed any proposed tolerance
F. Proposed tolerances for the pesticide chemical if tolerances are proposed
G. Reasonable grounds in support of the petition



10 Jan. 2014

Jamey Thomas, Ph.D.
Regulatory Leader
Dow AgroSciences LLC
9330 Zionsville Road
Indianapolis, IN 46268

Date

EXECUTIVE SUMMARY

Sulfoxaflor (1-(6-trifluoromethylpyridin-3-yl)ethyl](methyl)-oxido-λ4-sulfanylidenecyanamide; Product code XDE-208, CAS No. 946578-00-3) is an insecticide that controls a variety of sap-feeding insect pests, such as aphids, plant bugs, scales and mealybugs. It acts as an agonist of the insect nicotinic acetylcholine receptor in a manner distinct from other currently-registered insecticides, and there is a broad lack of cross-resistance between it and other products. It was discovered and developed by Dow AgroSciences and is registered in a variety of crops under the trademarks Transform® WG insecticide and Closer® SC insecticide.

Reasonable grounds are presented to establish tolerances for sulfoxaflor expressed as parent in or on corn, field, grain at 0.015 parts per million; corn, field, forage at 0.5 ppm; corn, field, stover at 0.8 ppm; corn, sweet, at 0.01 ppm; corn, sweet, forage at 0.6 ppm; corn, sweet, stover at 0.7 ppm; corn, pop at 0.015 ppm; corn, pop, stover at 0.8 ppm; teosinte, grain at 0.015 ppm; sorghum, grain at 0.3 ppm;, sorghum, forage at 0.4 ppm; sorghum, stover at 0.9 ppm; millet, grain at 0.3 ppm; millet, forage at 0.4 ppm; cacao bean, dried bean at 0.15 ppm; pineapple at 0.09 ppm; alfalfa, seed at 30 ppm;, alfalfa, forage at 7 ppm; alfalfa, hay at 20 ppm; alfalfa, silage at 9 ppm; clover forage at 15 ppm; clover hay at 20 ppm; clover silage at 8 ppm; animal feed, nongrass, group 18, forage at 15 ppm; animal feed, nongrass, group 18, hay at 20 ppm; animal feed, nongrass, group 18, silage at 9 ppm; buckwheat, grain at 0.08 ppm; buckwheat, forage at 1 ppm; buckwheat, hay at 1.5 ppm; buckwheat, straw at 2 ppm; triticale, grain at 0.08 ppm; triticale, forage at 1 ppm; triticale, hay at 1.5 ppm; triticale, straw at 2 ppm; rye, grain at 0.08 ppm; rye, forage at 1 ppm; rye, hay at 1.5 ppm; rye, straw at 2 ppm; teff, grain at 0.08 ppm; teff, forage at 1 ppm; teff, hay at 1.5 ppm; teff, straw at 2 ppm; oat, grain at 0.4 ppm; oat, hay at 1 ppm; oat, straw at 2 ppm.

Revised tolerances of parent, sulfoxaflor are also proposed for milk at 1 ppm; fat of cattle, goat, horse and sheep at 0.6 ppm; meat of cattle, goat, horse and sheep at 1 ppm; meat byproducts of cattle, goat, horse and sheep at 2.5 ppm; hog, fat at 0.04 ppm; hog, meat at 0.07 ppm; hog, meat yproducts at 0.2 ppm; egg at 0.08 ppm; poultry, meat at 0.09 ppm; poultry, fat at 0.03 ppm; and poultry, meat byproducts at 0.2 ppm.

1. SECTION A: THE NAME, CHEMICAL IDENTITY AND COMPOSITION OF SULFOXAFLOR

Please refer to attached data matrices.

Sulfoxaflor Technical	EPA Reg. No. 62719-631
Closer SC	EPA Reg. No. 62719-623
Transform WG	EPA Reg. No. 62719-625

2. SECTION B: THE AMOUNT, FREQUENCY AND TIME OF APPLICATION OF THE PESTICIDE CHEMICAL

Please refer to attached labels.

Sulfoxaflor Technical	EPA Reg. No. 62719-631
Closer SC	EPA Reg. No. 62719-623
Transform WG	EPA Reg. No. 62719-625

Sulfoxaflor Technical

EPA Reg. No. 62719-631

Registration Notes:

Source label text based on EPA-accepted text dated June 13, 2013.

1. Added Alfalfa, Buckwheat, Cacao, Corn (Field, Sweet, Seed, and Popcorn), Millet, Oats, Pineapple, Rye, Sorghum, Teff, and Teosinte.

Sulfoxaflor Technical

Insecticide

For Manufacturing Use Only

Active Ingredient:
sulfoxaflor 97.9%
Other Ingredients 2.1%
Total 100.0%

Keep Out of Reach of Children

CAUTION

Precautionary Statements

Hazards to Humans and Domestic Animals

Harmful If Swallowed ● Causes Moderate Eye Irritation

Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

Avoid contact with eyes or clothing.

First Aid

If swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or doctor. Do not give anything to an unconscious person.
If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may contact 1-800-992-5994 for emergency medical treatment information.

Environmental Hazards

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

This product may only be formulated into manufacturing-use insecticide products or end-use insecticide products for the following uses: alfalfa, barley, *Brassica* (cole) leafy vegetables (Crop Group 5), buckwheat, bulb vegetables (Crop Group 3-07), cacao, canola (rapeseed) (Subgroup 20A), citrus (Crop Group 10), Corn (Field, Sweet, Seed, and Popcorn), cotton, cucurbit vegetables (Crop Group 9), fruiting vegetables (Crop Group 8), leafy vegetables (except *Brassica*) (Crop Group 4), leaves of root and tuber vegetables (Crop Group 2), low growing berry (Subgroup 13-07G), millet, oats, okra, ornamentals

(herbaceous and woody), pineapple, pistachio, pome fruits (Crop Group 11), root and tuber vegetables (Crop Groups 1A and 1B), rye, small fruit vine climbing (except fuzzy kiwifruit) (Subgroup 13-07F), strawberry, sorghum, soybean, stone fruits (Crop Group 12), succulent, edible podded, and dry beans, teff, teosinte, tree nuts (Crop Group 14), triticale, turfgrass, watercress, wheat. This product may be used to formulate products for specific use(s) not listed on this label if the formulator, user group or grower has complied with U.S. EPA submission requirements regarding the support of such use(s). Consult Dow AgroSciences for instructions for formulation and other information.

(Storage and Disposal for rigid containers 5 gal or less)

Storage and Disposal

Do not contaminate water, food or feed by storage or disposal.
Pesticide Storage: Store in original container only.
Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.
Container Handling: Nonrefillable container. Do not reuse or refill this container.
Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

(Storage and Disposal for nonrigid containers any size)

Storage and Disposal

Do not contaminate water, food, or feed by storage or disposal.
Pesticide Storage: Store in original container only.
Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.
Container Handling: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available, or dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

(Storage and Disposal for refillable rigid containers larger than 5 gal)

Storage and Disposal

Do not contaminate water, food or feed by storage or disposal.
Pesticide Storage: Store in original container only.
Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.
Container Handling: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose.
Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

(Storage and Disposal for nonrefillable rigid containers larger than 5 gal)

Storage and Disposal

Do not contaminate water, food or feed by storage or disposal.
Pesticide Storage: Store in original container only.
Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.
Container Handling: Nonrefillable container. Do not reuse or refill this container.
Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Warranty Limitations and Disclaimer

Dow AgroSciences warrants that at the time of delivery, the product will conform to its chemical description on the label, that it will pass without objection in the trade under the contract description, that seller will convey good title thereto, and that such product will be delivered free from any lawful security interest, lien or encumbrance.

This is the only warranty made on this product. Dow AgroSciences EXPRESSLY DISCLAIMS ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND, EXCEPT AS SET FORTH IN THE ABOVE PARAGRAPH, ANY OTHER EXPRESS OR IMPLIED WARRANTIES. Buyer acknowledges the use of its own independent skill and expertise in the selection and use of the product and does not rely on any oral or written statements or representations.

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994.

Manufacturing Chemical: Do not ship or store with food, feeds, drugs, or clothing.

EPA Reg. No. 62719-631 EPA Est. _____

Produced for
Dow AgroSciences LLC
9330 Zionsville Road
Indianapolis, IN 46268

Net Weight _____

EPA accepted 06/13/13

C1C / Closer SC / MSTR / 01-07-14
file: Closer SC-623 MSTR 07Jan14d.doc

Closer® SC

EPA Reg. No. 62719-623

Registration Notes:

Source label text based on EPA-accepted text dated May 6, 2013 and non-notification dated May 7, 2013.

1. Added and affixed Alfalfa (R391-001), Barley, Buckwheat, Oats, Rye, Teff, Triticale, and Wheat (R391-002), Cacao (R391-003), Corn (Field, Sweet, Seed, and Popcorn), Millet, Sorghum, and Teosinte (R391-004), and Pineapple (R391-005) supplementals to label based on residue data.
2. Updated Table of Contents and sales copy with additional crops.
3. Added Isoclast Active active ingredient synonym.

Table of Contents for Master Label

(Base label):

Closer® SC

INSECTICIDE
Isoclast Active

For control or suppression of aphids, fleahoppers, plant bugs, stink bugs, whiteflies and certain psyllids, scales, and thrips in alfalfa and other non-grass animal feeds, barley, *Brassica* (cole) leafy vegetables, buckwheat, bulb vegetables, cacao, canola (rapeseed), citrus, cotton, cucurbit vegetables, field corn, fruiting vegetables, leafy vegetables (except *Brassica*), leaves of root and tuber vegetables, low growing berry, millet, oats, okra, ornamentals (herbaceous and woody), pineapple, pistachio, pome fruits, root and tuber vegetables, potatoes, rye, seed corn, small fruit vine climbing (except fuzzy kiwifruit) except strawberry, sorghum, soybean, strawberry, stone fruits, succulent, edible podded, and dry beans, sweet corn, teff, teosinte, tree nuts, triticale, turfgrass, watercress, and wheat.

Group	4C	INSECTICIDE

Active Ingredient:
sulfoxaflor 21.8%
Other Ingredients 78.2%
Total 100.0%

Contains 2 lb active ingredient per gallon.

Keep Out of Reach of Children

CAUTION

Precautionary Statements

Hazard to Humans and Domestic Animals

Causes Moderate Eye Irritation

Avoid contact with eyes or clothing.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

First Aid

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

Environmental Hazards

This product is highly toxic to bees exposed through contact during spraying and while spray droplets are still wet. This product may be toxic to bees exposed to treated foliage for up to 3 hours following application. Toxicity is reduced when spray droplets are dry.

Risk to managed bees and native pollinators from contact with pesticide spray or residues can be minimized when applications are made before 7:00 am or after 7:00 pm local time or when the temperature is below 55^{o} F at the site of application.

Refer to the Directions for Use for crop specific restrictions and additional advisory statements to protect pollinators.

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. Refer to the label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

(Storage and Disposal for rigid containers 5 gal or less)

Storage and Disposal

Do not contaminate water, food, or feed by storage or disposal.
Pesticide Storage: Store in original container only.
Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.
Container Handling: Nonrefillable container. Do not reuse or refill this container.
Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

(Storage and Disposal for refillable rigid containers greater than 5 gal)

Storage and Disposal

Do not contaminate water, food, or feed by storage or disposal.
Pesticide Storage: Store in original container only.
Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

Container Handling: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose.
Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

(Storage and Disposal for nonrefillable rigid containers larger than 5 gal)

Storage and Disposal

Do not contaminate water, food, or feed by storage or disposal.
Pesticide Storage: Store in original container only.
Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.
Container Handling: Nonrefillable container. Do not reuse or refill this container.
Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Refer to label booklet for Directions for Use.

Notice: Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

EPA Reg. No. 62719-623 EPA Est. _____

Scan this code for more information at mobile.dowagro.com/closer.

Produced for
Dow AgroSciences LLC
9330 Zionsville Road
Indianapolis, IN 46268

NET CONTENTS ____

(Cover, shipping container):

Closer® SC

INSECTICIDE
Isoclast Active

For control or suppression of aphids, fleahoppers, plant bugs, stink bugs, whiteflies and certain psyllids, scales, and thrips in alfalfa and other non-grass animal feeds, barley, *Brassica* (cole) leafy vegetables, buckwheat, bulb vegetables, cacao, canola (rapeseed), citrus, cotton, cucurbit vegetables, field corn, fruiting vegetables, leafy vegetables (except *Brassica*), leaves of root and tuber vegetables, low growing berry, millet, oats, okra, ornamentals (herbaceous and woody), pineapple, pistachio, pome fruits, root and tuber vegetables, potatoes, rye, seed corn, small fruit vine climbing (except fuzzy kiwifruit) except strawberry, sorghum, soybean, strawberry, stone fruits, succulent, edible podded, and dry beans, sweet corn, teff, teosinte, tree nuts, triticale, turfgrass, watercress, and wheat.

Group	4C	INSECTICIDE

Active Ingredient:
sulfoxaflor 21.8%
Other Ingredients 78.2%
Total 100.0%

Contains 2 lb active ingredient per gallon.

Keep Out of Reach of Children

CAUTION

Agricultural Use Requirements
Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. Refer to the label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

Refer to inside of label booklet for additional precautionary information including Directions for Use.

Notice: Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

EPA Reg. No. 62719-623 EPA Est. _____

Scan this code with a smart phone QR reader to access key information about this product at mobile.dowagro.com/closer. You will have access to the product label, application rates, product efficacy results, and more, all from your smart phone!

To download and install a mobile QR code reader, visit www.i-nigma.mobi on your mobile device.

Produced for
Dow AgroSciences LLC
9330 Zionsville Road
Indianapolis, IN 46268

NET CONTENTS ____

(Page 1 through end):

Table of Contents

Precautionary Statements

Hazard to Humans and Domestic Animals

CAUTION

Causes Moderate Eye Irritation

Avoid contact with eyes or clothing.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

First Aid

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

Environmental Hazards

This product is highly toxic to bees exposed through contact during spraying and while spray droplets are still wet. This product may be toxic to bees exposed to treated foliage for up to 3 hours following application. Toxicity is reduced when spray droplets are dry.

Risk to managed bees and native pollinators from contact with pesticide spray or residues can be minimized when applications are made before 7:00 am or after 7:00 pm local time or when the temperature is below 55^{o} F at the site of application.

Refer to the Directions for Use for crop specific restrictions and additional advisory statements to protect pollinators.

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
Read all Directions for Use carefully before applying.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Shoes plus socks

Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not enter or allow others to enter the treated area until sprays have dried.

Storage and Disposal

Do not contaminate water, food or feed by storage or disposal.
Pesticide Storage: Store in original container only.
Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

Nonrefillable rigid containers 5 gallons or less:
Container Handling: Nonrefillable container. Do not reuse or refill this container.
Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Refillable rigid containers larger than 5 gal:
Container Handling: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose.
Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Nonrefillable rigid containers larger than 5 gal:
Container Handling: Nonrefillable container. Do not reuse or refill this container.
Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Product Information

Carefully read, understand and follow label use rates and restrictions. Apply the amount specified in the following tables with properly calibrated aerial or ground spray equipment. Prepare only the amount of spray solution required to treat the measured acreage. The low rates may be used for light infestations of the target pests and the higher rates for moderate to heavy infestations. Closer® SC insecticide may be applied in either dilute or concentrate sprays so long as the application equipment is calibrated and adjusted to deliver thorough, uniform coverage. Use the specified amount of Closer SC per acre regardless of the spray volume used.

Use Precautions

Integrated Pest Management (IPM) Programs
Closer SC is recommended for IPM programs in labeled crops. Apply Closer SC when field scouting indicates target pest densities have reached the economic threshold, i.e., the point at which the insect population must be reduced to avoid economic losses beyond the cost of control. Other than reducing the target pest species as a food source, Closer SC does not have a significant impact on most parasitic insects or the natural predaceous arthropod complex in treated crops, including big-eyed bugs, ladybird beetles, flower bugs, lacewings, minute pirate bugs, damsel bugs, assassin bugs, predatory mites or spiders. The feeding activities of these beneficials will aid in natural control of other insects and reduce the likelihood of secondary pest outbreaks. If Closer SC is tank mixed with any insecticide that reduces its selectivity in preserving beneficial predatory insects, the full benefit of Closer SC in an IPM program may be reduced.

Insecticide Resistance Management (IRM)
Closer SC contains a Group 4C insecticide. Insect biotypes with acquired resistance to Group 4C insecticides may eventually dominate the insect population if Group 4C insecticides are used repeatedly in the same field or area, or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by Closer SC or other Group 4C insecticides.

To delay development of insecticide resistance, the following practices are recommended:
- Avoid consecutive use of insecticides on succeeding generations with the same mode of action (same insecticide group) on the same insect species.
- Consider tank mixtures or premix products containing insecticides with different modes of action (different insecticide groups) provided the products are registered for the intended use.
- Base insecticide use upon comprehensive IPM programs.
- Monitor treated insect populations in the field for loss of effectiveness.
- Do not treat seedling plants grown for transplant in greenhouses, shade houses, or field plots.

- Contact your local extension specialist, certified crop advisor, and/or manufacturer for insecticide resistance management and/or IPM recommendations for the specific site and resistant pest problems.
- For further information or to report suspected resistance, you may contact Dow AgroSciences by calling 800-258-3033.

Mixing Directions

Application Rate Reference Table

Application Rate of Closer SC (fl oz/acre)	Active Ingredient Equivalent (lb ai/acre)
0.75	0.012
1.5	0.023
2	0.031
2.75	0.043
3.5	0.061
4.25	0.066
4.5	0.070
5.75	0.09

Closer SC – Alone
Fill the spray tank with water to about 1/2 of the required spray volume. Start agitation and add the required amount of Closer SC. Continue agitation while mixing and filling the spray tank to the required spray volume. Maintain sufficient agitation during application to ensure uniformity of the spray mix. Do not allow water or spray mixture to back-siphon into the water source.

Closer SC - Tank Mix
Closer SC is believed to be compatible with most commonly used agricultural fungicides, insecticides, growth regulators, foliar fertilizers and spray adjuvants. However, whenever preparing a new tank mix, always conduct a compatibility test by mixing proportional amounts of all spray ingredients in a test vessel (jar). Shake the mixture vigorously and allow it to stand for 15 minutes. Rapid precipitation of the ingredients and failure to re-suspend when shaken indicates that the mixture is incompatible and should not be applied.

Mixing Order for Tank Mixes: Fill the spray tank with water to 1/4 to 1/3 of the required spray volume. Start agitation. Add different formulation types in the order indicated below, allowing time for complete dispersion and mixing after addition of each product. Allow extra dispersion and mixing time for dry flowable products.

Add different formulation types in the following order:
1. Water dispersible granules
2. Wettable powders
3. Closer SC and other aqueous suspensions

Maintain agitation and fill spray tank to 3/4 of total spray volume. Then add:
4. Emulsifiable concentrates and water-based solutions
5. Spray adjuvants, surfactants and oils
6. Foliar fertilizers

Finish filling the spray tank. Maintain continuous agitation during mixing, final filling and throughout application. If spraying and agitation must be stopped before the spray tank is empty, the materials may settle to the bottom. Settled materials must be resuspended before spraying is resumed. A sparger agitator is particularly useful for this purpose.

Premixing: Dry and flowable formulations may be premixed with water (slurried) and added to the spray

tank through a 20 to 35 mesh screen. This procedure assures good initial dispersion of these formulation types.

Application Directions

Not for Residential Use

Proper application techniques help ensure thorough spray coverage and correct dosage for optimum insect control. Apply Closer SC as a foliar spray at the rate indicated for target pest. The following directions are provided for ground and aerial application of Closer SC. Attention should be given to sprayer speed and calibration, wind speed, and foliar canopy to ensure adequate spray coverage.

Spray Drift Management

Wind: To reduce off-target drift and achieve maximum performance, apply when wind velocity favors on-target product deposition.

Temperature Inversions: Do not make ground or aerial applications during a temperature inversion. Temperature inversions are characterized by stable air and increasing temperatures with height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

Droplet Size: Use only medium or coarser spray nozzles (for ground and non-ULV aerial application) according to ASABE (S-572.1) definition for standard nozzles. In conditions of low humidity and high temperatures, applicators should use a coarser droplet size except where indicated for specific crops.

Ground Application

To prevent drift from groundboom applications, apply using a nozzle height of no more than 4 feet above the ground or crop canopy. Shut off the sprayer when turning at row ends. Risk of exposure to sensitive aquatic areas can be reduced by avoiding applications when wind directions are toward the aquatic area.

Airblast Sprayer: When using an airblast sprayer, coverage is also improved by operation of the sprayer at ground speeds that assure that the air volume within the tree canopy is completely replaced by the output from the airblast sprayer. Making applications in an alternate row middle pattern may result in less than satisfactory coverage and poor performance in conditions of high pest infestation levels, extremely large trees and/or dense foliage. For airblast applications, turn off outward pointing nozzles at row ends and when spraying the outer two rows. To minimize spray loss over the top in orchard applications, spray must be directed into the canopy.

Row Crop Application

Use calibrated power-operated ground spray equipment capable of providing uniform coverage of the target crop. Orient the boom and nozzles to obtain uniform crop coverage. Use a minimum of 5 to 10 gallons per acre, increasing volume with crop size and/or pest pressure. Use hollow cone, twin jet flat fan nozzles or other atomizer suitable for insecticide spraying to provide a medium to coarser spray quality (per ASABE S-572.1, see nozzle catalogs). Under certain conditions, drop nozzles may be required to obtain complete coverage of plant surfaces. Follow manufacturer's specifications for ideal nozzle spacing and spray pressure. Minimize boom height to optimize uniformity of coverage and maximize deposition (optimize on-target deposition) to reduce drift.

Orchard/Grove Spraying Application

Dilute Spray Application: This application method is based upon the premise that all plant parts are thoroughly wetted, to the point of runoff, with spray solution. To determine the number of gallons of dilute spray required per acre, contact your state agricultural experiment station, certified pest control advisor, or extension specialist for assistance.

Concentrate Spray Application: This application method is based upon the premise that all the plant parts are uniformly covered with spray solution but not to the point of runoff as with a dilute spray.

Instead, a lower spray volume is used to deliver the same application rate per acre as used for the dilute spray.

Aerial Application
Apply in a minimum spray volume of 3 gallons per acre. Mount the spray boom on the aircraft so as to minimize drift caused by wing tip or rotor vortices. Use the minimum practical boom length and do not exceed 75% of the wing span or 80% of the rotor diameter. Flight speed and nozzle orientation must be considered in determining droplet size. Spray must be released at the lowest height consistent with pest control and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety. When applications are made with a crosswind, the swath will be displaced downwind. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind.

Spray Adjuvants
The addition of agricultural adjuvants to sprays of Closer SC may improve initial spray deposits, redistribution and weatherability. Select adjuvants that are recommended and registered for your specific use pattern and follow their use directions. When an adjuvant is to be used with this product, Dow AgroSciences recommends the use of a Chemical Producers and Distributors Association certified adjuvant. Always add adjuvants last in the mixing process.

Chemigation Application
Closer SC may be applied through properly equipped chemigation systems for insect control in potatoes. Do not apply Closer SC by chemigation to other crops.

Use Directions for Chemigation: Closer SC may be applied through overhead sprinkler irrigation systems that will apply water uniformly, including center pivot, lateral move, end tow, side (wheel) roll, traveler, solid set, micro sprinkler, or hand move. Do not apply this product through any other type of irrigation system. Sprinkler systems that deliver a low coefficient of uniformity such as certain water drive units are not recommended.

For continuously moving systems, the mixture containing Closer SC must be injected continuously and uniformly into the irrigation water line as the sprinkler is moving. If continuously moving irrigation equipment is used, apply in no more than 0.25 inch of water. For irrigation systems that do not move during operation, apply in no more than 0.25 inch of irrigation immediately before the end of the irrigation cycle.

Chemigation Preparation: The following use directions are to be followed when this product is applied through irrigation systems. Thoroughly clean the chemigation system and tank of any fertilizer or chemical residues, and dispose of the residues according to state and federal laws. Flush the injection system with soap or a cleaning agent and water. Determine the amount of Closer SC needed to cover the desired acreage. Mix according to instructions in the Mixing Directions section above. Continually agitate the mixture during mixing and application.

Chemigation Equipment Calibration: In order to calibrate the irrigation system and injector to apply the mixture containing Closer SC, determine the following: 1) Calculate the number of acres irrigated by the system; 2) Calculate the amount of product required and premix; 3) Determine the irrigation rate and determine the number of minutes for the system to cover the intended treatment area; 4) Calculate the total gallons of insecticide mixture needed to cover the desired acreage. Divide the total gallons of insecticide mixture needed by the number of minutes (minus time to flush out) to cover the treatment area. This value equals the gallons per minute output that the injector or eductor must deliver. Convert the gallons per minute to milliliters or ounces per minute if needed. Calibrate the injector system with the system in operation at the desired irrigation rate. It is suggested that the injection pump/system be calibrated at least twice before operation, and the system should be monitored during operation.

Chemigation Operation: Start the water pump and irrigation system, and let the system achieve the desired pressure and speed before starting the injector. Check for leaks and uniformity and make repairs

before any chemigation takes place. Start the injection system and calibrate according to manufacturer's specifications. This procedure is necessary to deliver the desired rate per acre in a uniform manner. When the application is finished, allow the entire irrigation and injection system to be thoroughly flushed clean before stopping the system.

Chemigation Precautions:

- Lack of effectiveness or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
- If you have questions about calibration, contact state extension service specialists, equipment manufacturers or other experts.
- Do not connect an irrigation system used for pesticide application (including greenhouse systems) to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place with current certification. Specific local regulations may apply and must be followed.
- A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall operate the system and make necessary adjustments should the need arise and continuously monitor the injection.
- Do not apply when wind speed favors drift beyond the area intended for treatment. End guns must be turned off during the application if they irrigate nontarget areas.
- Do not allow irrigation water to collect or run off and pose a hazard to livestock, wells, or adjoining crops.
- Do not enter treated area during the reentry interval specified in the Agricultural Use Requirements section of this label unless required PPE is worn.
- Do not apply through sprinkler systems that deliver a low coefficient of uniformity such as certain water drive units.

Chemigation Specific Equipment Requirements:

- The system must contain an air gap or approved backflow prevention device, or approved functional check valve, vacuum relief valve (including inspection port), and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow. Refer to the American Society of Agricultural Engineer's Engineering Practice 409 for more information or state specific regulations.
- The pesticide injection line must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection chemical supply.
- A pesticide injection pump must also contain a functional interlock, e.g., mechanical or electrical to shut off chemical supply when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection when the water pressure drops too low or water flow stops.
- Use of public water supply requires approval of a backflow prevention device or air gap (preferred) by both state and local authorities.
- Systems must use a metering device, such as a positive displacement injection pump (or flow meter on eductor) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. An electric powered pump must meet Section 675 for "Electrically Driven or Controlled Irrigation Machines" NEC 70.
- To insure uniform mixing of the insecticide in the water line, inject the mixture in the center of the pipe diameter or just ahead of an elbow or tee in the irrigation line so that the turbulence created at those points will assist in mixing. The injection point must be located after all backflow prevention devices on the water line.
- The tank holding the insecticide mixture should be free of rust, fertilizer, sediment, and foreign material, and equipped with an in-line strainer situated between the tank and the injection point.

Rotational Crop Restrictions

The following rotational crops may be planted at intervals defined below following the final application of Closer SC at specified rates for a registered use.

Crop	Re-Planting Interval
crops registered use	no restrictions
all other crops grown for food or feed	30 days

Use Directions

Alfalfa and other non-grass animal feeds (Crop Group 18)[1]:

[1]Including Alfalfa, alfalfa grown for seed, clover, velvetbean, vetch

Pests and Application Rates:

Pests	Closer SC (fl oz/acre)
aphids	1.5 – 2.0 (0.023 – 0.031 lb ai/acre)
Tarnished plant bug Western tarnished plant bug	2.75 – 5.75 (0.043 – 0.09 lb ai/acre)

Advisory Pollinator Statement: Notifying known beekeepers within 1 mile of the treatment area 48 hours before the product is applied will allow them to take additional steps to protect their bees.

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 7 days of grazing, or forage, fodder, or hay harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than two applications per cutting.
- Do not apply more than a total of 17.0 fl oz of Closer SC (0.266 lb ai of sulfoxaflor) per acre per year.

Barley, Buckwheat, Oats, Rye, Teff, Triticale and Wheat

Pests and Application Rates:

Pests	Closer SC (fl oz/acre)
aphids greenbug	1.0 – 1.5 (0.016 – 0.023 lb ai/acre)
Russian wheat aphid	1.5 – 2.75 (0.023 – 0.043 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 14 days of grain or straw harvest or within 7 days of grazing, or forage, fodder, or hay harvest.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than two applications per crop.
- Do not apply more than a total of 5.75 fl oz of Closer SC (0.09 lb ai of sulfoxaflor) per acre per year.

Brassica (Cole) Leafy Vegetables (Crop Group 5)[1]

[1]*Brassica* (cole) leafy vegetables (crop group 5) including broccoli, broccoli raab, Brussels sprouts, cabbage, cauliflower, cavalo, Chinese broccoli (gia lon), Chinese cabbage (bok choy), Chinese cabbage (napa), Chinese mustard cabbage (gai choy), collards, kale, kohlrabi, mizuna, mustard greens, mustard spinach, rape greens, white flowering broccoli

Pests and Application Rates:

Pests	Closer SC (fl oz/acre)
aphids	1.5 – 2.0 (0.023 – 0.031 lb ai/acre)
silverleaf whitefly sweetpotato whitefly	4.25 – 5.75 (0.066 – 0.09 lb ai/acre)
thrips (suppression only)	5.75 (0.09 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area. Two applications may be required for optimum control of whiteflies.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 3 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 17 fl oz of Closer SC (0.266 lb ai of sulfoxaflor) per acre per year.
- Do not apply this product at any time between 3 days prior to bloom and until after petal fall.

Bulb Vegetables (Crop Group 3-07)[1]

[1]Bulb vegetables (crop group 3-07) including beltsville bunching onion, bulb daylilly, bulb fritillaria, bulb garlic, bulb lily, bulb onion, bulb shallot, Chinese bulb onion, Chinese fresh leaf chive, elegans hosta, fresh leaf chive, fresh leaf shallot, fresh onion, garlic, great-headed bulb garlic, green onion, kurrat, lady's leek, leek, leaf fritillaria, macrostem onion, pearl onion, potato bulb onion, serpent bulb garlic, tree onion tops, Welsh onion, wild leek, and cultivars, varieties, and/or hybrids of these

Pests and Application Rates:

Pests	Closer SC (fl oz/acre)
onion thrips (suppression only)	5.75 (0.09 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Restrictions:
- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than three applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 17 fl oz of Closer SC (0.266 lb ai of sulfoxaflor) per acre per year.
- Do not apply this product at any time between 3 days prior to bloom and until after petal fall.

Cacao

Pests and Application Rates:

Pests	Closer SC (fl oz/acre)
Black citrus aphid	2.3 (0.036 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 3 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 28 days apart.
- Do not make more than four applications per crop.
- Do not apply more than a total of 9.2 fl oz of Closer SC (0.14 lb ai of sulfoxaflor) per acre per year.

Canola (Rapeseed) (Subgroup 20A)[1]

[1]Canola (rapeseed) (subgroup 20A) including borage, canola, crambe, cuphea, echium, flax seed, gold of pleasure, hare's ear mustard, lesquerella, lunaria, meadowfoam, milkweed, mustard seed, oil radish, poppy seed, rapeseed, sesame, sweet rocket, and cultivars, varieties and/or hybrids of these

Pests and Application Rates:

Pests	Closer SC (fl oz/acre)
aphids	1.0 – 1.5 (0.016 – 0.023 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 14 days of grain, straw, forage, fodder, or hay harvest.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than two applications per year.
- Do not apply more than a total of 3.0 fl oz of Closer SC (0.046 lb ai of sulfoxaflor) per acre per year.
- Do not apply this product at any time between 3 days prior to bloom and until after petal fall.

Citrus (Crop Group 10)[1]

[1]Citrus (crop group 10) including citrus citron, grapefruit, kumquat, lemon, lime, orange, tangelo, tangerine, and hybrids of these

Pests and Application Rates:

Pests	Closer SC (fl oz/acre)
aphids	1.5 – 2.75 (0.023 – 0.043 lb ai/acre)
Asian citrus psyllid citrus snow scale mealybugs	2.75 – 5.75 (0.043 – 0.09 lb ai/acre)
Citrus thrips Florida red scale	5.75 (0.09 lb ai/acre)
Suppression only: California red scale citricola scale	5.75 (0.09 lb ai/acre)

Advisory Pollinator Statement: Notifying known beekeepers within 1 mile of the treatment area 48 hours before the product is applied will allow them to take additional steps to protect their bees. Also, limiting application to times when managed bees and native pollinators are least active, e.g., before 7 am or after 7 pm local time or when the temperature is below 55^{o}F at the site of application, will minimize risk to bees.

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area. Time application for scales to the crawler stage.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 1 day of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 17 fl oz of Closer SC (0.266 lb ai of sulfoxaflor) per acre per year.
- Only one application is allowed between 3 days before bloom and until after petal fall per year.

Corn (Field, Sweet, Seed, and Popcorn), Millet, Sorghum and Teosinte

Pests and Application Rates:

Pests	Closer SC (fl oz/acre)
aphids	1.5 – 2.75 (0.023 – 0.043 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
Sweet Corn
- • **Preharvest Interval:** Do not apply within 7 days of harvest.Do not apply more than a total of 5.50 fl oz of Closer SC (0.09 lb ai of sulfoxaflor) per acre per year.
- Do not make more than two application peracre per year.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.

Field Corn, Sweet Corn and Popcorn, Millet, Sorghum and Teosinte
- **Preharvest Interval:** Do not apply within 7 days of harvest for forage, and 14 days for grain or stover.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than two applications per acre per year.
- Do not apply more than a total of 5.50 fl oz of Closer SC (0.09 lb ai of sulfoxaflor) per acre per year.

Cotton

Pests and Application Rates:

Pests	Closer SC (fl oz/acre)
cotton aphid	1.5 – 2.0 (0.023 – 0.031 lb ai/acre)
cotton fleahopper	1.5 – 3.0 (0.023 – 0.046 lb ai/acre)
tarnished plant bug western tarnished plant bug	2.75 – 4.5 (0.043 – 0.07 lb ai/acre)
silverleaf whitefly sweetpotato whitefly	4.5 (0.07 lb ai/acre)
Suppression only: thrips brown stink bug southern green stink bug	4.5 (0.07 lb ai/acre)

Pests	Closer SC (fl oz/acre)

Advisory Pollinator Statement: Notifying known beekeepers within 1 mile of the treatment area 48 hours before the product is applied will allow them to take additional steps to protect their bees.

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Use a higher rate in the rate range for heavy pest populations. Two applications may be required for optimum tarnished plant bug control under high pest pressure or heavy immigration of plant bugs from other crops.

Restrictions:
- **Preharvest Interval:** Do not apply within 14 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 5 days apart.
- Do not make more than four applications per acre per year.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 17 fl oz of Closer SC (0.266 lb ai of sulfoxaflor) per acre per year.

Cucurbit Vegetables (Crop Group 9)[1]

[1]Cucurbit vegetables (crop group 9) including balsam apple, balsam pear, bitter melon, casaba, chayote, Chinese cucumber, Chinese okra, crenshaw melon, crookneck squash, cucumber, cucuzza, edible gourds, golden pershaw melon, hechima, honey balls, honeydew melon, hyotan, mango melon, muskmelons (cantaloupe, honeydew, etc.), Persian melon, pineapple melon, pumpkin, Santa Claus melon, scallop squash, snake melon, spaghetti squash, straightneck squash, summer squash, true cantaloupe, vegetable marrow, watermelon, winter squash, and other varieties and/or hybrids of these

Pests and Application Rates:

Pests	Closer SC (fl oz/acre)
aphids	1.5 – 2.0 (0.023 – 0.031 lb ai/acre)
silverleaf whitefly sweetpotato whitefly thrips (suppression only)	4.25 – 4.5 (0.066 – 0.07 lb ai/acre)

Advisory Pollinator Statement: Notifying known beekeepers within 1 mile of the treatment area 48 hours before the product is applied will allow them to take additional steps to protect their bees. Also, limiting application to times when managed bees and native pollinators are least active, e.g., before 7 am or after 7 pm local time or when the temperature is below 55^{o}F at the site of application, will minimize risk to bees.

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area. Two applications may be required for optimum control of whiteflies

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 1 day of harvest.

- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 17 fl oz of Closer SC (0.266 lb ai of sulfoxaflor) per acre per year.

Fruiting Vegetables (Crop Group 8)[1] and Okra

[1]Fruiting vegetables (crop group 8) including bell pepper, eggplant, groundcherry, hot pepper, pepino, pepper (except black), pimento, sweet pepper, tomatillo, tomato

Pests and Application Rates:

Pests	Closer SC (fl oz/acre)
aphids	1.5 – 2.0 (0.023 – 0.031 lb ai/acre)
plant bugs	2.75 – 4.5 (0.043 – 0.07 lb ai/acre)
greenhouse whitefly (outdoors) silverleaf whitefly sweetpotato whitefly thrips (suppression only)	4.25 – 4.5 (0.066 – 0.07 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area. Two applications may be required for optimum control of whiteflies.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 1 day of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 17 fl oz of Closer SC (0.266 lb ai of sulfoxaflor) per acre per year.

Leafy Vegetables (Except *Brassica*) (Crop Group 4)[1] and Watercress

[1]Leafy vegetables (except *Brassica*) (crop group 4) including amaranth, arugula, cardoon, celery, celtuce, chervil, Chinese celery, Chinese spinach, corn salad, cos (romaine), dandelion, dock, edible-leaved chrysanthemum, endive (escarole), finochio, Florence fennel, garden cress, garden purslane, garland chrysanthemum, head lettuce, leaf lettuce, leafy amaranth, New Zealand spinach, orach, parsley, radicchio (red chicory), rhubarb, spinach, sweet anise, sweet fennel, Swiss chard, tampala, upland cress, vine spinach, winter cress, winter purslane, yellow rocket

Pests and Application Rates:

Pests	Closer SC (fl oz/acre)
aphids	1.5 – 2.0 (0.023 – 0.031 lb ai/acre)
silverleaf whitefly sweetpotato whitefly	4.25 – 5.75 (0.066 – 0.09 lb

	ai/acre)
thrips (suppression only)	5.75 (0.09 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area. Two applications may be required for optimum control of whiteflies

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 3 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 17 fl oz of Closer SC (0.266 lb ai of sulfoxaflor) per acre per year.
- Do not apply this product at any time between 3 days prior to bloom and until after petal fall.

Leaves of Root and Tuber Vegetables (Crop Group 2)[1]

[1]Leaves of root and tuber vegetables (crop group 2) including bitter cassava, black salsify, broccoli raab, carrot, celeriac (celery root), chicory, dasheen (taro), edible burdock, garden beet, hanover salad, oriental radish (daikon), parsnip, raab, raab salad, radish, rutabaga, sugar beet, sweet cassava, sweet potato, tanier, true yam, turnip, turnip-rooted chervil

Pests and Application Rates:

Pests	**Closer SC (fl oz/acre)**
aphids	1.5 – 2.0 (0.023 – 0.031 lb ai/acre)
leafhoppers	2.75 – 5.75 (0.043 – 0.09 lb ai/acre)
silverleaf whitefly sweetpotato whitefly	4.25 – 5.75 (0.066 – 0.09 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area. Two applications may be required for optimum control of whiteflies.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 17 fl oz of Closer SC (0.266 lb ai of sulfoxaflor) per acre per year.
- Do not apply this product at any time between 3 days prior to bloom and until after petal fall.

Ornamentals (Herbaceous and Woody) Growing Outdoors, in Nurseries (Including Conifer Seed Orchards), or in Greenhouses

(Non-residential use only)

Pests and Application Rates:

Pests	Closer SC (fl oz/gal)	Closer SC (fl oz/100 gal)	Closer SC (fl oz/acre)
aphids, such as: green peach aphid rose aphid	0.014	1.4	2.75 (0.043 lb ai/acre)
mealybugs, such as: mealybug, juniper mealybug, maple mealybug, taxus others scales, such as: carnelia scale euonymus scale fletcher scale pine needle scale others whiteflies, such as: greenhouse whitefly silverleaf whitefly	0.03	3.0	4.5 - 5.75 (0.070 – 0.09 lb ai/acre)

Advisory Pollinator Statement: Notifying known beekeepers within 1 mile of the treatment area 48 hours before the product is applied will allow them to take additional steps to protect their bees. Also, limiting application to times when managed bees and native pollinators are least active, e.g., before 7 am or after 7 pm local time or when the temperature is below 55^{o}F at the site of application, will minimize risk to bees.

Application Method: Dilute Closer SC in water and apply using suitable hand- or power-operated application equipment (such as tractor-mounted, portable pump-up, backpack, hydraulic, boom) in a manner to provide complete and uniform plant coverage. Two applications may be required for optimum control of whiteflies.

Closer SC may be aerially applied to commercially grown ornamentals only. Aerial or ground applications in product agriculture or directed ground applications to individual plants are permitted. Do not make aerial applications in immediate proximity of residential, commercial, government, institutional or other structures where people may be present including homes, apartments, offices, churches, schools, and businesses. Aerial applicators should evaluate conditions existing at the time of application and make appropriate adjustments to reduce drift. In urban areas, however, use is limited to directed ground applications.

Application Rate: Closer SC may be used up to a maximum labeled rate of 0.03 fl oz per gallon (3.0 fl oz per 100 gallons, 6.0 fl oz per acre) per application on trees and ornamentals as a general treatment regardless of the target insect pest. Use pest specific rates when a single insect pest or group of insect pests within a rate category is the only intended target.

Spray Volume: Attempt to penetrate dense foliage, but avoid over spraying to the point of excessive runoff. Uniform coverage of both upper and lower leaf surfaces is critical for effective insect control.

Restrictions:

- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than four applications per year.
- Do not make more than two consecutive applications.
- Do not apply more than a total of 17 fl oz of Closer SC (0.266 lb ai of sulfoxaflor) per acre per year.
- Do not make more than one application during bloom. The single application during bloom must not exceed a rate of 4.5 oz (0.070 lb/ai per acre).

Pineapple

Pests and Application Rates:

Pests	Closer SC (fl oz/acre)
mealybugs	2.75 – 5.75 (0.043 – 0.090 lb ai/acre)

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than two applications per acre per year.
- Do not apply more than a total of 11.5 fl oz of Closer SC (0.180 lb ai of sulfoxaflor) per acre per year.
- Do not apply this product at any time between 3 days prior to bloom and until after petal fall.

Pome Fruits (Crop Group 11)[1]

[1]Pome fruits (crop group 11) including apples, crabapple, loquat, mayhaw, pears, quince

Pests and Application Rates:

Pests	Closer SC (fl oz/acre)
Aphids (except woolly apple aphid) white apple leafhopper	1.5 – 2.75 (0.023 – 0.043 lb ai/acre)
plant bugs woolly apple aphid	2.75 – 5.75 (0.043 – 0.09 lb ai/acre)
pear psylla (suppression only) San Jose scale (suppression only)	5.75 (0.09 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area. Time application for San Jose scale to the crawler stage.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 17 fl oz of Closer SC (0.266 lb ai of sulfoxaflor) per acre per year.

- Do not apply this product at any time between 3 days prior to bloom and until after petal fall.

Root and Tuber Vegetables (Crop Groups 1A and 1B)[1]

[1]Root and tuber vegetables (crop group 1) including bitter black salsify, carrot, celeriac, chayote (root), chicory, chufa, daikon, dasheen, edible burdock, garden beet, ginseng, horseradish, lobok, lo pak, oriental radish, parsnip, radish, red Chinese radish, red Japanese radish, rutabaga, salsify, skirret, Spanish salsify, sugar beet, turnip, turnip-rooted chervil, turnip-rooted parsley, white Chinese radish, white Japanese radish, winter radish, and other cultivars or hybrids of these

Pests and Application Rates:

Pests	Closer SC (fl oz/acre)
aphids	1.5 – 2.75 (0.023 – 0.043 lb ai/acre)
leafhoppers	2.75 – 5.75 (0.043 – 0.09 lb ai/acre)
silverleaf whitefly sweetpotato whitefly	4.25 – 5.75 (0.066 – 0.09 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area. Two applications may be required for optimum control of whiteflies.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 17 fl oz of Closer SC (0.266 lb ai of sulfoxaflor) per acre per year.
- Do not apply this product at any time between 3 days prior to bloom and until after petal fall.

Potatoes (Crop Groups 1C and 1D)[1]

[1]Root and tuber vegetables (crop group 1) including arracacha, arrowroot, bitter black salsify, bitter cassava, chayote (root), Chinese artichoke, chufa, daikon, dasheen, edible canna, ginger, Jerusalem artichoke, leren, lobok, lo pak, potato, radish, sweet cassava, sweet potato, tanier, true yam, turmeric, yam, yam bean, and other cultivars or hybrids of these

Pests and Application Rates:

Pests	Closer SC (oz/acre)
aphids	1.5 – 2.75 (0.023 – 0.043 lb ai/acre)
leafhoppers	2.75 – 4.5 (0.043 – 0.07 lb ai/acre)
Potato psyllid	4.0 – 4.5

	(0.061 – 0.07 lb ai/acre)
silverleaf whitefly sweetpotato whitefly	4.5 (0.07 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area. Two applications may be required for optimum control of whiteflies.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 17 oz of Closer SC (0.266 lb ai of sulfoxaflor) per acre per year.

Small Fruit Vine Climbing (Except Fuzzy Kiwifruit) (Subgroup 13-07F)[1] and Low Growing Berry (Subgroup 13-07G)[2] except Strawberry

[1]Small fruit vine climbing (except fuzzy kiwifruit) (subgroup 13-07F) including amur river grape, gooseberry, grape, hardy kiwifruit, maypop, schisandra berry, and cultivars, varieties and/or hybrids of these

[2]Low growing berry (subgroup 13-07G) including bearberry, bilberry, lowbush blueberry, cloudberry, cranberry, lingonberry, muntries, partridgeberry, and cultivars, varieties and/or hybrids of these

Pests and Application Rates:

Pests	Closer SC (fl oz/acre)
grape leafhopper mealybugs plant bugs	2.75 – 5.75 (0.043 – 0.09 lb ai/acre)
thrips (suppression)	5.75 (0.09 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 7 days of harvest of small fruit vine climbing (except fuzzy kiwifruit) and within 1 day of harvest of low growing berry.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 17 fl oz of Closer SC (0.266 lb ai of sulfoxaflor) per acre per year.
- Do not apply this product at any time between 3 days prior to bloom and until after petal fall.

Strawberry

Pests and Application Rates:

Pests	Closer SC (oz/acre)
plant bugs	2.75 – 4.5 (0.043 – 0.07 lb ai/acre)
thrips (suppression only)	4.5 (0.07 lb ai/acre)

Advisory Pollinator Statement: Notifying known beekeepers within 1 mile of the treatment area 48 hours before the product is applied will allow them to take additional steps to protect their bees. Also, limiting application to times when managed bees and native pollinators are least active, e.g., before 7 am or after 7 pm local time or when the temperature is below 55°F at the site of application, will minimize risk to bees.

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 1 day of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 17 oz of Closer SC (0.266 lb ai of sulfoxaflor) per acre per year.

Soybean

Pests and Application Rates:

Pests	Closer SC (fl oz/acre)
soybean aphid	1.5 – 2.0 (0.023 – 0.031 lb ai/acre)
Suppression only: brown stink bug southern green stink bug	4.5 (0.07 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 7 days of grain, forage or hay harvest.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 17 fl oz of Closer SC (0.266 lb ai of sulfoxaflor) per acre per year.
- No more than two applications may be made to soybean forage.

Stone Fruits (Crop Group 12)[1]

[1]Stone fruits (crop group 12) including apricot, nectarine, peach, plum, prune, sweet cherry, tart cherry

Pests and Application Rates:

Pests	Closer SC (fl oz/acre)
aphids	1.5 – 2.75 (0.023 – 0.043 lb ai/acre)
San Jose scale (suppression only) western flower thrips (suppression only)	5.75 (0.09 ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area. Time application for San Jose scale to the crawler stage.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:

- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 17 fl oz of Closer SC (0.266 lb ai of sulfoxaflor) per acre per year.
- Do not apply this product at any time between 3 days prior to bloom and until after petal fall.

Succulent, Edible Podded, and Dry Beans[1]

[1]Succulent, edible podded, and dry beans including adzuki bean, asparagus bean, bean, blackeyed pea, broad bean, chickpea, Chinese longbean, cowpea, fava bean, field bean, garbanzo bean, grain lupine, green lima bean, jackbean, kidney bean, lablab bean, lima bean, moth bean, mung bean, navy bean, pinto bean, rice bean, runner bean, snap bean, soybean (immature seed), sweet lupine, sword bean, tepary bean, wax bean, white lupine, white sweet lupine, yardlong bean

Pests and Application Rates:

Pests	Closer SC (fl oz/acre)
aphids	1.5 – 2.0 (0.023 – 0.031 lb ai/acre)
plant bugs	2.75 – 4.5 (0.043 – 0.07 lb ai/acre)
brown stink bug (suppression only) southern green stink bug thrips (suppression only)	4.5 (0.07 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 17 fl oz of Closer SC (0.266 lb ai of sulfoxaflor) per acre per year.

Tree Nuts (Crop Group 14)[1] and Pistachio

[1]Tree nuts (crop group 14) including almonds, cashew, chestnut, filbert (hazelnut), macadamia nut, pecan, walnut

Pests and Application Rates:

Pests	Closer SC (fl oz/acre)
aphids	1.5 – 2.75 (0.023 – 0.045 lb ai/acre)
San Jose scale (suppression only)	5.75 (0.09 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area. Time application for San Jose scale to the crawler stage.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 17 fl oz of Closer SC (0.266 lb ai of sulfoxaflor) per acre per year.
- Do not apply this product at any time between 3 days prior to bloom and until after petal fall.

Turfgrass

(For application only to commercial sod farms and grass grown for seed)

Pests and Application Rates:

Pests	Closer SC (fl oz/acre)
aphids (greenbug)	2.75 (0.043 lb ai/acre)
chinch bugs	5.75 (0.09 lb ai/acre)

Application Method: Dilute Closer SC in water and apply using suitable hand- or power-operated application equipment (such as tractor-mounted, portable pump-up, backpack, hydraulic, boom, turf "spray gun") in a manner to provide complete and uniform plant coverage.

Restrictions:

- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 17 fl oz of Closer SC (0.266 lb ai of sulfoxaflor) per acre per year.
- Do not feed treated grass cuttings (hay) or seed screenings to livestock or use hay for livestock bedding.
- Do not apply to golf courses, parks, playgrounds, athletic fields or residential lawns.
- Do not make aerial applications to turfgrass.

Terms and Conditions of Use

If terms of the following Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid. Otherwise, use by the buyer or any other user constitutes acceptance of the terms under Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies.

Warranty Disclaimer

Dow AgroSciences warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. Dow AgroSciences MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

Inherent Risks of Use

It is impossible to eliminate all risks associated with use of this product. Plant injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperature, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Dow AgroSciences or the seller. To the extent consistent with applicable law all such risks shall be assumed by buyer.

Limitation of Remedies

To the extent permitted by law, the exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at Dow AgroSciences' election, one of the following:

1. Refund of purchase price paid by buyer or user for product bought, or
2. Replacement of amount of product used

Dow AgroSciences shall not be liable for losses or damages resulting from handling or use of this product unless Dow AgroSciences is promptly notified of such loss or damage in writing. In no case shall Dow AgroSciences be liable for consequential or incidental damages or losses.

The terms of the Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of Dow AgroSciences or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or Limitation of Remedies in any manner.

EPA accepted __/__/__

List of Supplemental Labels

Supplemental Name	EPA Approval Date
For control or suppression of aphids and plant bugs in alfalfa and other non-grass animal feeds (Crop Group 18)[1]: [1]Including Alfalfa, alfalfa grown for seed, clover, velvetbean, vetch	New; pending review/approval
For control or suppression of aphids in Barley, Buckwheat, Oats, Rye, Teff, Triticale and Wheat	New; pending review/approval
For control or suppression of aphids in cacao	New; pending review/approval
For control or suppression of aphids in Corn (Field, Sweet, Seed, and Popcorn), Millet, Sorghum and Teosinte	New; pending review/approval
For control or suppression of mealybugs in pineapple	New; pending review/approval

Supplemental Labeling

Dow AgroSciences

Dow AgroSciences LLC 9330 Zionsville Road Indianapolis, IN 46268-1054 USA

Closer® SC

EPA Reg. No. 62719-623

For control or suppression of aphids and plant bugs in alfalfa and other non-grass animal feeds (Crop Group 18)[1]:

[1]Including Alfalfa, alfalfa grown for seed, clover, velvetbean, vetch

ATTENTION

- It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
- This labeling must be in the possession of the user at the time of application.
- Read the label affixed to the container for Closer® SC insecticide before applying. Carefully follow all precautionary statements and applicable use directions.
- Use of Closer SC according to this supplemental labeling is subject to all use precautions and limitations imposed by the label affixed to the container for Closer SC.

Directions for Use

Refer to product label for General Use Precautions, Mixing and Application instructions.

Pests	Closer SC (fl oz/acre)

aphids	1.5 – 2.0 (0.023 – 0.031 lb ai/acre)
Tarnished plant bug Western tarnished plant bug	2.75 – 5.75 (0.043 – 0.09 lb ai/acre)

Advisory Pollinator Statement: Notifying known beekeepers within 1 mile of the treatment area 48 hours before the product is applied will allow them to take additional steps to protect their bees.

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 7 days of grazing, or forage, fodder, or hay harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than two applications per cutting.
- Do not apply more than a total of 17.0 fl oz of Closer SC (0.266 lb ai of sulfoxaflor) per acre per year.

Note: This product is highly toxic to bees exposed through contact during spraying and while spray droplets are still wet. This product may be toxic to bees exposed to treated foliage for up to 3 hours following application. Toxicity is reduced when spray droplets are dry. Refer to the Environmental Hazards section of the product label attached to the product container for required protective measures.

R391-001
EPA accepted __/__/__
Initial printing

Supplemental Labeling

Dow AgroSciences

Dow AgroSciences LLC 9330 Zionsville Road Indianapolis, IN 46268-1054 USA

Closer® SC

EPA Reg. No. 62719-623

For control or suppression of aphids in Barley, Buckwheat, Oats, Rye, Teff, Triticale and Wheat

ATTENTION

- It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
- This labeling must be in the possession of the user at the time of application.
- Read the label affixed to the container for Closer® SC insecticide before applying. Carefully follow all precautionary statements and applicable use directions.
- Use of Closer SC according to this supplemental labeling is subject to all use precautions and limitations imposed by the label affixed to the container for Closer SC.

Directions for Use

Refer to product label for General Use Precautions, Mixing and Application instructions.

Pests and Application Rates:

Pests	Closer SC (fl oz/acre)

aphids greenbug	1.0 – 1.5 (0.016 – 0.023 lb ai/acre)
Russian wheat aphid	1.5 – 2.75 (0.023 – 0.043 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 14 days of grain or straw harvest or within 7 days of grazing, or forage, fodder, or hay harvest.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than two applications per crop.
- Do not apply more than a total of 5.75 fl oz of Closer SC (0.09 lb ai of sulfoxaflor) per acre per year.

Note: This product is highly toxic to bees exposed through contact during spraying and while spray droplets are still wet. This product may be toxic to bees exposed to treated foliage for up to 3 hours following application. Toxicity is reduced when spray droplets are dry. Refer to the Environmental Hazards section of the product label attached to the product container for required protective measures.

R391-002
EPA accepted __/__/__
Initial printing

Supplemental Labeling

Dow AgroSciences

Dow AgroSciences LLC 9330 Zionsville Road Indianapolis, IN 46268-1054 USA

Closer® SC

EPA Reg. No. 62719-623

For control or suppression of aphids in cacao

ATTENTION

- It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
- This labeling must be in the possession of the user at the time of application.
- Read the label affixed to the container for Closer® SC insecticide before applying. Carefully follow all precautionary statements and applicable use directions.
- Use of Closer SC according to this supplemental labeling is subject to all use precautions and limitations imposed by the label affixed to the container for Closer SC.

Directions for Use

Refer to product label for General Use Precautions, Mixing and Application instructions.

Pests and Application Rates:

Pests	Closer SC (fl oz/acre)

Black citrus aphid	2.3 (0.036 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 3 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 28 days apart.
- Do not make more than four applications per crop.
- Do not apply more than a total of 9.2 fl oz of Closer SC (0.14 lb ai of sulfoxaflor) per acre per year.

Note: This product is highly toxic to bees exposed through contact during spraying and while spray droplets are still wet. This product may be toxic to bees exposed to treated foliage for up to 3 hours following application. Toxicity is reduced when spray droplets are dry. Refer to the Environmental Hazards section of the product label attached to the product container for required protective measures.

R391-003
EPA accepted __/__/__
Initial printing

Supplemental Labeling

Dow AgroSciences

Dow AgroSciences LLC 9330 Zionsville Road Indianapolis, IN 46268-1054 USA

Closer® SC

EPA Reg. No. 62719-623

For control or suppression of aphids in Corn (Field, Sweet, Seed, and Popcorn), Millet, Sorghum and Teosinte

ATTENTION

- It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
- This labeling must be in the possession of the user at the time of application.
- Read the label affixed to the container for Closer® SC insecticide before applying. Carefully follow all precautionary statements and applicable use directions.
- Use of Closer SC according to this supplemental labeling is subject to all use precautions and limitations imposed by the label affixed to the container for Closer SC.

Directions for Use

Refer to product label for General Use Precautions, Mixing and Application instructions.

Pests and Application Rates:

Pests	Closer SC (fl oz/acre)

aphids	1.5 – 2.75 (0.023 – 0.043 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
Sweet Corn
- **Preharvest Interval:** Do not apply within 7 days of harvest.Do not apply more than a total of 5.50 fl oz of Closer SC (0.09 lb ai of sulfoxaflor) per acre per year.
- Do not make more than two application peracre per year.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.

Field Corn, Sweet Corn and Popcorn, Millet, Sorghum and Teosinte
- **Preharvest Interval:** Do not apply within 7 days of harvest for forage, and 14 days for grain or stover.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than two applications per acre per year.
- Do not apply more than a total of 5.50 fl oz of Closer SC (0.09 lb ai of sulfoxaflor) per acre per year.

Note: This product is highly toxic to bees exposed through contact during spraying and while spray droplets are still wet. This product may be toxic to bees exposed to treated foliage for up to 3 hours following application. Toxicity is reduced when spray droplets are dry. Refer to the Environmental Hazards section of the product label attached to the product container for required protective measures.

R391-004
EPA accepted __/__/__
Initial printing

Supplemental Labeling

Dow AgroSciences

Dow AgroSciences LLC 9330 Zionsville Road Indianapolis, IN 46268-1054 USA

Closer® SC

EPA Reg. No. 62719-623

For control or suppression of mealybugs in pineapple

ATTENTION

- It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
- This labeling must be in the possession of the user at the time of application.
- Read the label affixed to the container for Closer® SC insecticide before applying. Carefully follow all precautionary statements and applicable use directions.
- Use of Closer SC according to this supplemental labeling is subject to all use precautions and limitations imposed by the label affixed to the container for Closer SC.

Directions for Use

Refer to product label for General Use Precautions, Mixing and Application instructions.

Pests and Application Rates:

Pests	Closer SC (fl oz/acre)

mealybugs	2.75 – 5.75 (0.043 – 0.090 lb ai/acre)

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than two applications per acre per year.
- Do not apply more than a total of 11.5 fl oz of Closer SC (0.180 lb ai of sulfoxaflor) per acre per year.
- Do not apply this product at any time between 3 days prior to bloom and until after petal fall.

Note: This product is highly toxic to bees exposed through contact during spraying and while spray droplets are still wet. This product may be toxic to bees exposed to treated foliage for up to 3 hours following application. Toxicity is reduced when spray droplets are dry. Refer to the Environmental Hazards section of the product label attached to the product container for required protective measures.

R391-005
EPA accepted __/__/__
Initial printing

Transform® WG

EPA Reg. No. 62719-625

Registration Notes:

Source label text based on EPA-accepted text dated May 6, 2013 and non-notification dated May 7, 2013.

1. Added and affixed Alfalfa (R396-010), Barley, Buckwheat, Oats, Rye, Teff, Triticale, and Wheat (R396-014), Cacao (R396-011), Corn (Field, Sweet, Seed, and Popcorn), Millet, Sorghum, and Teosinte (R396-012), and Pineapple (R396-013) supplementals to label based on residue data.
2. Updated Table of Contents and sales copy with additional crops.
3. Added Isoclast Active active ingredient synonym.

Table of Contents for Master Label

(Base label):

Transform® WG

INSECTICIDE
Isoclast Active

For control or suppression of aphids, fleahoppers, plant bugs, stink bugs, whiteflies and certain psyllids, scales, and thrips in alfalfa and other non-grass animal feeds, barley, *Brassica* (cole) leafy vegetables, buckwheat, bulb vegetables, cacao, canola (rapeseed), citrus, cotton, cucurbit vegetables, field corn, fruiting vegetables, leafy vegetables (except *Brassica*), leaves of root and tuber vegetables, low growing berry, millet, oats, okra, ornamentals (herbaceous and woody), pineapple, pistachio, pome fruits, root and tuber vegetables, popcorn, potatoes, rye, seed corn, small fruit vine climbing (except fuzzy kiwifruit) except strawberry, strawberry, sorghum, soybean, stone fruits, succulent, edible podded, and dry beans, sweet corn, teff, teosinte, tree nuts, triticale, turfgrass, watercress, and wheat.

Group	4C	INSECTICIDE

Active Ingredient:
sulfoxaflor 50%
Other Ingredients 50%
Total 100%

Contains 50% active ingredient on a weight basis.

Keep Out of Reach of Children

DANGER PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

Precautionary Statements

Hazard to Humans and Domestic Animals

Corrosive. Causes Irreversible Eye Damage • Harmful If Swallowed

Do not get in eyes or on clothing.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

First Aid

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
If swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

Environmental Hazards

This product is highly toxic to bees exposed through contact during spraying and while spray droplets are still wet. This product may be toxic to bees exposed to treated foliage for up to 3 hours following application. Toxicity is reduced when spray droplets are dry.

Risk to managed bees and native pollinators from contact with pesticide spray or residues can be minimized when applications are made before 7:00 am or after 7:00 pm local time or when the temperature is below 55^{o} F at the site of application.

Refer to the Directions for Use for crop specific restrictions and additional advisory statements to protect pollinators.

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. Refer to the label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

(Storage and Disposal for rigid containers 5 gal or less)

Storage and Disposal

Do not contaminate water, food, or feed by storage or disposal.
Pesticide Storage: Store in original container only.
Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.
Container Handling: Nonrefillable container. Do not reuse or refill this container.
Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure

two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

(Storage and Disposal for nonrigid containers any size)

Storage and Disposal

Do not contaminate water, food, or feed by storage or disposal.
Pesticide Storage: Store in original container only.
Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.
Container Handling: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available, or dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

(Storage and Disposal for refillable rigid containers greater than 5 gal)

Storage and Disposal

Do not contaminate water, food, or feed by storage or disposal.
Pesticide Storage: Store in original container only.
Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.
Container Handling: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose.
Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

(Storage and Disposal for nonrefillable rigid containers larger than 5 gal)

Storage and Disposal

Do not contaminate water, food, or feed by storage or disposal.
Pesticide Storage: Store in original container only.
Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.
Container Handling: Nonrefillable container. Do not reuse or refill this container.
Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Refer to label booklet for Directions for Use.

Notice: Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

EPA Reg. No. 62719-625 EPA Est. _____

Scan this code with a smart phone QR reader to access key information about this product at mobile.dowagro.com/transform. You will have access to the product label, application rates, product efficacy results, and more, all from your smart phone!

To download and install a mobile QR code reader, visit www.i-nigma.mobi on your mobile device.

Produced for
Dow AgroSciences LLC
9330 Zionsville Road
Indianapolis, IN 46268

NET WEIGHT ____

(Cover, shipping container):

Transform® WG

INSECTICIDE
Isoclast Active

For control or suppression of aphids, fleahoppers, plant bugs, stink bugs, whiteflies and certain psyllids, scales, and thrips in alfalfa and other non-grass animal feeds, barley, *Brassica* (cole) leafy vegetables, buckwheat, bulb vegetables, cacao, canola (rapeseed), citrus, cotton, cucurbit vegetables, field corn, fruiting vegetables, leafy vegetables (except *Brassica*), leaves of root and tuber vegetables, low growing berry, millet, oats, okra, ornamentals (herbaceous and woody), pineapple, pistachio, pome fruits, popcorn, root and tuber vegetables, potatoes, rye, seed corn, small fruit vine climbing (except fuzzy kiwifruit) except strawberry, sorghum, soybean, strawberry, stone fruits, succulent, edible podded, and dry beans, sweet corn, teff, teosinte, tree nuts, triticale, turfgrass, watercress, and wheat.

Group	4C	INSECTICIDE

Active Ingredient:
sulfoxaflor 50%
Other Ingredients 50%
Total 100%

Contains 50% active ingredient on a weight basis.

Keep Out of Reach of Children

DANGER PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

Agricultural Use Requirements
Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. Refer to the label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

Refer to inside of label booklet for additional precautionary information including Directions for Use.

Notice: Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.**

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Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

EPA Reg. No. 62719-625 EPA Est. _____

Scan this code with a smart phone QR reader to access key information about this product at mobile.dowagro.com/transform. You will have access to the product label, application rates, product efficacy results, and more, all from your smart phone!

To download and install a mobile QR code reader, visit www.i-nigma.mobi on your mobile device.

Produced for
Dow AgroSciences LLC
9330 Zionsville Road
Indianapolis, IN 46268

NET WEIGHT ____

(Page 1 through end):

Table of Contents **Page**

Precautionary Statements

Hazard to Humans and Domestic Animals

DANGER

Corrosive. Causes Irreversible Eye Damage • Harmful If Swallowed

Do not get in eyes or on clothing.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
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If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

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NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

Environmental Hazards

This product is highly toxic to bees exposed through contact during spraying and while spray droplets are still wet. This product may be toxic to bees exposed to treated foliage for up to 3 hours following application. Toxicity is reduced when spray droplets are dry.

Risk to managed bees and native pollinators from contact with pesticide spray or residues can be minimized when applications are made before 7:00 am or after 7:00 pm local time or when the temperature is below 55^{o} F at the site of application.

Refer to the Directions for Use for crop specific restrictions and additional advisory statements to protect pollinators.

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the

mean high water mark. Do not contaminate water when disposing of equipment washwaters.

Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
Read all Directions for Use carefully before applying.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Shoes plus socks

Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not enter or allow others to enter the treated area until sprays have dried.

Storage and Disposal

Do not contaminate water, food or feed by storage or disposal.
Pesticide Storage: Store in original container only.
Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

Nonrefillable rigid containers 5 gallons or less:
Container Handling: Nonrefillable container. Do not reuse or refill this container.
Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Nonrefillable nonrigid containers:

Container Handling: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available, or dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Refillable rigid containers larger than 5 gal:
Container Handling: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose.
Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Nonrefillable rigid containers larger than 5 gal:
Container Handling: Nonrefillable container. Do not reuse or refill this container.
Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Product Information

Carefully read, understand and follow label use rates and restrictions. Apply the amount specified in the following tables with properly calibrated aerial or ground spray equipment. Prepare only the amount of spray solution required to treat the measured acreage. The low rates may be used for light infestations of the target pests and the higher rates for moderate to heavy infestations. Transform® WG insecticide may be applied in either dilute or concentrate sprays so long as the application equipment is calibrated and adjusted to deliver thorough, uniform coverage. Use the specified amount of Transform WG per acre regardless of the spray volume used.

Use Precautions

Integrated Pest Management (IPM) Programs
Transform WG is recommended for IPM programs in labeled crops. Apply Transform WG when field scouting indicates target pest densities have reached the economic threshold, i.e., the point at which the insect population must be reduced to avoid economic losses beyond the cost of control. Other than reducing the target pest species as a food source, Transform WG does not have a significant impact on most parasitic insects or the natural predaceous arthropod complex in treated crops, including big-eyed bugs, ladybird beetles, flower bugs, lacewings, minute pirate bugs, damsel bugs, assassin bugs, predatory mites or spiders. The feeding activities of these beneficials will aid in natural control of other insects and reduce the likelihood of secondary pest outbreaks. If Transform WG is tank mixed with any insecticide that reduces its selectivity in preserving beneficial predatory insects, the full benefit of Transform WG in an IPM program may be reduced.

Insecticide Resistance Management (IRM)

Transform WG contains a Group 4C insecticide. Insect biotypes with acquired resistance to Group 4C insecticides may eventually dominate the insect population if Group 4C insecticides are used repeatedly in the same field or area, or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by Transform WG or other Group 4C insecticides.

To delay development of insecticide resistance, the following practices are recommended:
- Avoid consecutive use of insecticides on succeeding generations with the same mode of action (same insecticide subgroup, 4C) on the same insect species.
- Consider tank mixtures or premix products containing insecticides with different modes of action (different insecticide groups) provided the products are registered for the intended use.
- Base insecticide use upon comprehensive IPM programs.
- Monitor treated insect populations in the field for loss of effectiveness.
- Do not treat seedling plants grown for transplant in greenhouses, shade houses, or field plots.
- Contact your local extension specialist, certified crop advisor, and/or manufacturer for insecticide resistance management and/or IPM recommendations for the specific site and resistant pest problems.
- For further information or to report suspected resistance, you may contact Dow AgroSciences by calling 800-258-3033.

Mixing Directions

Application Rate Reference Table

Application Rate of Transform WG (oz/acre)	Active Ingredient Equivalent (lb ai/acre)
0.75	0.023
1	0.031
1.5	0.047
1.75	0.055
2.25	0.071
2.75	0.086

Transform WG – Alone
Fill the spray tank with water to about 1/2 of the required spray volume. Start agitation and add the required amount of Transform WG. Continue agitation while mixing and filling the spray tank to the required spray volume. Maintain sufficient agitation during application to ensure uniformity of the spray mix. Do not allow water or spray mixture to back-siphon into the water source.

Transform WG - Tank Mix
When tank mixing Transform WG with other materials, conduct compatibility test (jar test) using relative proportions of the tank mix ingredients prior to mixing ingredients in the spray tank. If foliar fertilizers are used, the jar test should be repeated with each batch of fertilizer utilizing the mixing water source. Vigorous, continuous agitation during mixing, filling and throughout application is required for all tank mixes. Sparger pipe agitators generally provide the most effective agitation in spray tanks. To prevent foaming in the spray tank, avoid stirring or splashing air into the spray mixture.

Mixing Order for Tank Mixes: Fill the spray tank with water to 1/4 to 1/3 of the required spray volume. Start agitation. Add different formulation types in the order indicated below, allowing time for complete dispersion and mixing after addition of each product. Allow extra dispersion and mixing time for dry flowable products.

Add different formulation types in the following order:
1. Transform WG and other water dispersible granules
2. Wettable powders
3. Suspension concentrates and other liquids

Maintain agitation and fill spray tank to 3/4 of total spray volume. Then add:
4. Emulsifiable concentrates and water-based solutions
5. Spray adjuvants, surfactants and oils
6. Foliar fertilizers

Finish filling the spray tank. Maintain continuous agitation during mixing, final filling and throughout application. If spraying and agitation must be stopped before the spray tank is empty, the materials may settle to the bottom. Settled materials must be resuspended before spraying is resumed. A sparger agitator is particularly useful for this purpose.

Premixing: Dry and flowable formulations may be premixed with water (slurried) and added to the spray tank through a 20 to 35 mesh screen. This procedure assures good initial dispersion of these formulation types.

Application Directions

Not for Residential Use

Do not apply Transform WG in greenhouses or other enclosed structures used for growing crops.

Proper application techniques help ensure thorough spray coverage and correct dosage for optimum insect control. Apply Transform WG as a foliar spray at the rate indicated for target pest. The following directions are provided for ground and aerial application of Transform WG. Attention should be given to sprayer speed and calibration, wind speed, and foliar canopy to ensure adequate spray coverage.

Spray Drift Management

Wind: To reduce off-target drift and achieve maximum performance, apply when wind velocity favors on-target product deposition.

Temperature Inversions: Do not make ground or aerial applications during a temperature inversion. Temperature inversions are characterized by stable air and increasing temperatures with height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

Droplet Size: Use only medium or coarser spray nozzles (for ground and non-ULV aerial application) according to ASABE (S-572.1) definition for standard nozzles. In conditions of low humidity and high temperatures, applicators should use a coarser droplet size except where indicated for specific crops.

Ground Application

To prevent drift from groundboom applications, apply using a nozzle height of no more than 4 feet above the ground or crop canopy. Shut off the sprayer when turning at row ends. Risk of exposure to sensitive aquatic areas can be reduced by avoiding applications when wind directions are toward the aquatic area.

Row Crop Application

Use calibrated power-operated ground spray equipment capable of providing uniform coverage of the target crop. Orient the boom and nozzles to obtain uniform crop coverage. Use a minimum of 5 to 10 gallons per acre, increasing volume with crop size and/or pest pressure. Use hollow cone, twin jet flat fan nozzles or other atomizer suitable for insecticide spraying to provide a fine to coarse spray quality (per ASABE S-572.1, see nozzle catalogs). Under certain conditions, drop nozzles may be required to obtain complete coverage of plant surfaces. Follow manufacturer's specifications for ideal nozzle spacing and spray pressure. Minimize boom height to optimize uniformity of coverage and maximize deposition (optimize on-target deposition) to reduce drift.

Orchard/Grove Spraying Application

Dilute Spray Application: This application method is based upon the premise that all plant parts are

thoroughly wetted, to the point of runoff, with spray solution. To determine the number of gallons of dilute spray required per acre, contact your state agricultural experiment station, certified pest control advisor, or extension specialist for assistance.

Concentrate Spray Application: This application method is based upon the premise that all the plant parts are uniformly covered with spray solution but not to the point of runoff as with a dilute spray. Instead, a lower spray volume is used to deliver the same application rate per acre as used for the dilute spray.

Aerial Application
Apply in a minimum spray volume of 3 gallons per acre. Mount the spray boom on the aircraft so as to minimize drift caused by wing tip or rotor vortices. Use the minimum practical boom length and do not exceed 75% of the wing span or 80% of the rotor diameter. Flight speed and nozzle orientation must be considered in determining droplet size. Spray must be released at the lowest height consistent with pest control and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety. When applications are made with a crosswind, the swath will be displaced downwind. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind.

Spray Adjuvants
The addition of agricultural adjuvants to sprays of Transform WG may improve initial spray deposits, redistribution and weatherability. Select adjuvants that are recommended and registered for your specific use pattern and follow their use directions. When an adjuvant is to be used with this product, Dow AgroSciences recommends the use of a Chemical Producers and Distributors Association certified adjuvant. Always add adjuvants last in the mixing process.

Chemigation Application
Transform WG may be applied through properly equipped chemigation systems for insect control in potatoes. Do not apply Transform WG by chemigation to other crops.

Use Directions for Chemigation: Transform WG may be applied through overhead sprinkler irrigation systems that will apply water uniformly, including center pivot, lateral move, end tow, side (wheel) roll, traveler, solid set, micro sprinkler, or hand move. Do not apply this product through any other type of irrigation system. Sprinkler systems that deliver a low coefficient of uniformity such as certain water drive units are not recommended.

For continuously moving systems, the mixture containing Transform WG must be injected continuously and uniformly into the irrigation water line as the sprinkler is moving. If continuously moving irrigation equipment is used, apply in no more than 0.25 inch of water. For irrigation systems that do not move during operation, apply in no more than 0.25 inch of irrigation immediately before the end of the irrigation cycle.

Chemigation Preparation: The following use directions are to be followed when this product is applied through irrigation systems. Thoroughly clean the chemigation system and tank of any fertilizer or chemical residues, and dispose of the residues according to state and federal laws. Flush the injection system with soap or a cleaning agent and water. Determine the amount of Transform WG needed to cover the desired acreage. Mix according to instructions in the Mixing Directions section above. Continually agitate the mixture during mixing and application.

Chemigation Equipment Calibration: In order to calibrate the irrigation system and injector to apply the mixture containing Transform WG, determine the following: 1) Calculate the number of acres irrigated by the system; 2) Calculate the amount of product required and premix; 3) Determine the irrigation rate and determine the number of minutes for the system to cover the intended treatment area; 4) Calculate the total gallons of insecticide mixture needed to cover the desired acreage. Divide the total gallons of insecticide mixture needed by the number of minutes (minus time to flush out) to cover the treatment area. This value equals the gallons per minute output that the injector or eductor must deliver. Convert

the gallons per minute to milliliters or ounces per minute if needed. Calibrate the injector system with the system in operation at the desired irrigation rate. It is suggested that the injection pump/system be calibrated at least twice before operation, and the system should be monitored during operation.

Chemigation Operation: Start the water pump and irrigation system, and let the system achieve the desired pressure and speed before starting the injector. Check for leaks and uniformity and make repairs before any chemigation takes place. Start the injection system and calibrate according to manufacturer's specifications. This procedure is necessary to deliver the desired rate per acre in a uniform manner. When the application is finished, allow the entire irrigation and injection system to be thoroughly flushed clean before stopping the system.

Chemigation Precautions:

- Lack of effectiveness or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
- If you have questions about calibration, contact state extension service specialists, equipment manufacturers or other experts.
- Do not connect an irrigation system used for pesticide application (including greenhouse systems) to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place with current certification. Specific local regulations may apply and must be followed.
- A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall operate the system and make necessary adjustments should the need arise and continuously monitor the injection.
- Do not apply when wind speed favors drift beyond the area intended for treatment. End guns must be turned off during the application if they irrigate nontarget areas.
- Do not allow irrigation water to collect or run off and pose a hazard to livestock, wells, or adjoining crops.
- Do not enter treated area during the reentry interval specified in the Agricultural Use Requirements section of this label unless required PPE is worn.
- Do not apply through sprinkler systems that deliver a low coefficient of uniformity such as certain water drive units.

Chemigation Specific Equipment Requirements:

- The system must contain an air gap or approved backflow prevention device, or approved functional check valve, vacuum relief valve (including inspection port), and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow. Refer to the American Society of Agricultural Engineer's Engineering Practice 409 for more information or state specific regulations.
- The pesticide injection line must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection chemical supply.
- A pesticide injection pump must also contain a functional interlock, e.g., mechanical or electrical to shut off chemical supply when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection when the water pressure drops too low or water flow stops.
- Use of public water supply requires approval of a backflow prevention device or air gap (preferred) by both state and local authorities.
- Systems must use a metering device, such as a positive displacement injection pump (or flow meter on eductor) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. An electric powered pump must meet Section 675 for "Electrically Driven or Controlled Irrigation Machines" NEC 70.
- To insure uniform mixing of the insecticide in the water line, inject the mixture in the center of the pipe diameter or just ahead of an elbow or tee in the irrigation line so that the turbulence created at those points will assist in mixing. The injection point must be located after all backflow prevention devices on the water line.
- The tank holding the insecticide mixture should be free of rust, fertilizer, sediment, and foreign material, and equipped with an in-line strainer situated between the tank and the injection point.

Rotational Crop Restrictions

The following rotational crops may be planted at intervals defined below following the final application of Transform WG at specified rates for a registered use.

Crop	Re-Planting Interval
crops registered use	no restrictions
all other crops grown for food or feed	30 days

Use Directions

Alfalfa and other non-grass animal feeds (Crop Group 18)[1]:

[1]Including Alfalfa, alfalfa grown for seed, clover, velvetbean, vetch

Pests and Application Rates:

Pests	Transform WG (oz/acre)
aphids	0.75 – 1.0 (0.023 – 0.031 lb ai/acre)
Tarnished plant bug Western tarnished plant bug	1.5 – 2.75 (0.047 – 0.086 lb ai/acre)

Advisory Pollinator Statement: Notifying known beekeepers within 1 mile of the treatment area 48 hours before the product is applied will allow them to take additional steps to protect their bees.

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 7 days of grazing, or forage, fodder, or hay harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than two applications per cutting.
- Do not apply more than a total of 8.5 oz of Transform WG (0.266 lb ai of sulfoxaflor) per acre per year.

Barley, Buckwheat, Oats, Rye, Teff, Triticale and Wheat

Pests and Application Rates:

Pests	Transform WG (oz/acre)
aphids greenbug	0.5 – 0.75 (0.016 – 0.023 lb ai/acre)

Russian wheat aphid	0.75 – 1.5 (0.023 - 0.047 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 14 days of grain or straw harvest or within 7 days of grazing, or forage, fodder, or hay harvest.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than two applications per crop.
- Do not apply more than a total of 2.8 oz of Transform WG (0.09 lb ai of sulfoxaflor) per acre per year.

Brassica (Cole) Leafy Vegetables (Crop Group 5)[1]

[1]*Brassica* (cole) leafy vegetables (crop group 5) including broccoli, broccoli raab, Brussels sprouts, cabbage, cauliflower, cavalo, Chinese broccoli (gia lon), Chinese cabbage (bok choy), Chinese cabbage (napa), Chinese mustard cabbage (gai choy), collards, kale, kohlrabi, mizuna, mustard greens, mustard spinach, rape greens, white flowering broccoli

Pests and Application Rates:

Pests	Transform WG (oz/acre)
Aphids	0.75 – 1.0 (0.023 – 0.031 lb ai/acre)
silverleaf whitefly sweetpotato whitefly	2.0 – 2.75 (0.063 – 0.086 lb ai/acre)
thrips (suppression only)	2.75 (0.086 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area. Two applications may be required for optimum control of whiteflies.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 3 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 8.5 oz of Transform WG (0.266 lb ai of sulfoxaflor) per acre per year.
- Do not apply this product at any time between 3 days prior to bloom and until after petal fall.

Bulb Vegetables (Crop Group 3-07)[1]

[1]Bulb vegetables (crop group 3-07) including beltsville bunching onion, bulb daylilly, bulb fritillaria, bulb garlic, bulb lily, bulb onion, bulb shallot, Chinese bulb onion, Chinese fresh leaf chive, elegans hosta,

fresh leaf chive, fresh leaf shallot, fresh onion, garlic, great-headed bulb garlic, green onion, kurrat, lady's leek, leek, leaf fritillaria, macrostem onion, pearl onion, potato bulb onion, serpent bulb garlic, tree onion tops, Welsh onion, wild leek, and cultivars, varieties, and/or hybrids of these

Pests and Application Rates:

Pests	Transform WG (oz/acre)
onion thrips (suppression only)	2.75 (0.086 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Restrictions:
- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 8.5 oz of Transform WG (0.266 lb ai of sulfoxaflor) per acre per year.
- Do not apply this product at any time between 3 days prior to bloom and until after petal fall.

Cacao

Pests and Application Rates:

Pests	Transform WG (oz/acre)
Black citrus aphid	1.2 (0.038 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 3 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 28 days apart.
- Do not make more than four applications per crop.
- Do not apply more than a total of 4.8 oz of Transform WG (0.14 lb ai of sulfoxaflor) per acre per year.

Canola (Rapeseed) (Subgroup 20A)[1]

[1]Canola (rapeseed) (subgroup 20A) including borage, canola, crambe, cuphea, echium, flax seed, gold of pleasure, hare's ear mustard, lesquerella, lunaria, meadowfoam, milkweed, mustard seed, oil radish, poppy seed, rapeseed, sesame, sweet rocket, and cultivars, varieties and/or hybrids of these

Pests and Application Rates:

Pests	Transform WG (oz/acre)
Aphids	0.5 – 0.75 (0.016 – 0.023 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 14 days of grain, straw, forage, fodder, or hay harvest.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than two applications per year.
- Do not apply more than a total of 1.5 oz of Transform WG (0.046 lb ai of sulfoxaflor) per acre per year.
- Do not apply this product at any time between 3 days prior to bloom and until after petal fall.

Citrus (Crop Group 10)[1]

[1]Citrus (crop group 10) including citrus citron, grapefruit, kumquat, lemon, lime, orange, tangelo, tangerine, and hybrids of these

Pests and Application Rates:

Pests	Transform WG (oz/acre)
Aphid	0.75 – 1.5 (0.023 - 0.047 lb ai/acre)
Asian citrus psyllid citrus snow scale mealybugs	1.5 – 2.75 (0.047 – 0.086 lb ai/acre)
Citrus thrips Florida red scale	2.75 (0.086 lb ai/acre)
Suppression only: California red scale citricola scale	2.75 (0.086 lb ai/acre

Advisory Pollinator Statement: Notifying known beekeepers within 1 mile of the treatment area 48 hours before the product is applied will allow them to take additional steps to protect their bees. Also, limiting application to times when managed bees and native pollinators are least active, e.g., before 7 am or after 7 pm local time or when the temperature is below 55°F at the site of application, will minimize risk to bees.

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area. Time application for scales to the crawler stage.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 1 day of harvest.

- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 8.5 oz of Transform WG (0.266 lb ai of sulfoxaflor) per acre per year.
- Only one application is allowed between 3 days before bloom and until after petal fall per year.

Corn (Field, Sweet, Seed, and Popcorn), Millet, Sorghum and Teosinte

Pests and Application Rates:

Pests	Transform WG (oz/acre)
aphids	0.75 – 1.5 (0.023 – 0.047 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
Sweet Corn
- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than two applications per acre per year.
- Do not apply more than a total of 3.0 oz of Transform WG (0.09 lb ai of sulfoxaflor) per acre per year.

Field Corn, Seed Corn and Popcorn, Millet, Sorghum and Teosinte
- **Preharvest Interval:** Do not apply within 7 days of harvest for forage, and 14 days for grain or stover.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than two applications per acre per year.
- Do not apply more than a total of 3.0 oz of Transform WG (0.09 lb ai of sulfoxaflor) per acre per year.

Cotton

Pests and Application Rates:

Pests	Transform WG (oz/acre)
cotton aphid	0.75 – 1.0 (0.023 – 0.031 lb ai/acre)
cotton fleahopper	0.75 – 1.5 (0.023 – 0.047 lb ai/acre)
tarnished plant bug western tarnished plant bug	1.5 – 2.25 (0.047 – 0.071 lb ai/acre)

Pests	Transform WG (oz/acre)
sweetpotato whitefly, silverleaf whitefly	2.0 – 2.25 (0.063 – 0.071 lb ai/acre)
Suppression only: brown stink bug, southern green stink bug, thrips	2.0 – 2.25 (0.063 – 0.071 lb ai/acre)

Advisory Pollinator Statement: Notifying known beekeepers within 1 mile of the treatment area 48 hours before the product is applied will allow them to take additional steps to protect their bees.

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Use a higher rate in the rate range for heavy pest populations. Two applications may be required for optimum tarnished plant bug control under high pest pressure or heavy immigration of plant bugs from other crops.

Restrictions:
- **Preharvest Interval:** Do not apply within 14 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 5 days apart.
- Do not make more than four applications per acre per year.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 8.5 oz of Transform WG (0.266 lb ai of sulfoxaflor) per acre per year.

Cucurbit Vegetables (Crop Group 9)[1]

[1]Cucurbit vegetables (crop group 9) including balsam apple, balsam pear, bitter melon, casaba, chayote, Chinese cucumber, Chinese okra, crenshaw melon, crookneck squash, cucumber, cucuzza, edible gourds, golden pershaw melon, hechima, honey balls, honeydew melon, hyotan, mango melon, muskmelons (cantaloupe, honeydew, etc.), Persian melon, pineapple melon, pumpkin, Santa Claus melon, scallop squash, snake melon, spaghetti squash, straightneck squash, summer squash, true cantaloupe, vegetable marrow, watermelon, winter squash, and other varieties and/or hybrids of these

Pests and Application Rates:

Pests	Transform WG (oz/acre)
Aphids	0.75 (0.023 lb ai/acre)
silverleaf whitefly sweetpotato whitefly	2.0 – 2.25 (0.063 – 0.071 lb ai/acre)
thrips (suppression only)	2.25 (0.071 lb ai/acre)

Advisory Pollinator Statement: Notifying known beekeepers within 1 mile of the treatment area 48 hours before the product is applied will allow them to take additional steps to protect their bees. Also, limiting application to times when managed bees and native pollinators are least active, e.g., before 7 am or after 7 pm local time or when the temperature is below 55°F at the site of application, will minimize risk to bees.

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area. Two applications may be required for optimum control of whiteflies

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 1 day of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 8.5 oz of Transform WG (0.266 lb ai of sulfoxaflor) per acre per year.

Fruiting Vegetables (Crop Group 8)[1] and Okra

[1]Fruiting vegetables (crop group 8) including bell pepper, eggplant, groundcherry, hot pepper, pepino, pepper (except black), pimento, sweet pepper, tomatillo, tomato

Pests and Application Rates:

Pests	Transform WG (oz/acre)
Aphids	0.75 – 1.0 (0.023 – 0.031 lb ai/acre)
plant bugs	1.5 – 2.25 (0.047 - 0.071 lb ai/acre)
greenhouse whitefly (outdoors) silverleaf whitefly sweetpotato whitefly	2 – 2.25 (0.063 – 0.071 lb ai/acre)
thrips (suppression only)	2.25 (0.071 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area. Two applications may be required for optimum control of whiteflies.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 1 day of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 8.5 oz of Transform WG (0.266 lb ai of sulfoxaflor) per acre per year.

Leafy Vegetables (Except *Brassica*) (Crop Group 4)[1] and Watercress

[1]Leafy vegetables (except *Brassica*) (crop group 4) including amaranth, arugula, cardoon, celery, celtuce, chervil, Chinese celery, Chinese spinach, corn salad, cos (romaine), dandelion, dock, edible-leaved chrysanthemum, endive (escarole), finochio, Florence fennel, garden cress, garden purslane, garland chrysanthemum, head lettuce, leaf lettuce, leafy amaranth, New Zealand spinach, orach, parsley,

radicchio (red chicory), rhubarb, spinach, sweet anise, sweet fennel, Swiss chard, tampala, upland cress, vine spinach, winter cress, winter purslane, yellow rocket

Pests and Application Rates:

Pests	Transform WG (oz/acre)
Aphids	0.75 – 1.0 (0.023 - 0.031 lb ai/acre)
silverleaf whitefly sweetpotato whitefly	2.0 – 2.75 (0.063 – 0.086 lb ai/acre)
thrips (suppression only)	2.75 (0.086 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area. Two applications may be required for optimum control of whiteflies

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 3 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 8.5 oz of Transform WG (0.266 lb ai of sulfoxaflor) per acre per year.
- Do not apply this product at any time between 3 days prior to bloom and until after petal fall.

Leaves of Root and Tuber Vegetables (Crop Group 2)[1]

[1]Leaves of root and tuber vegetables (crop group 2) including bitter cassava, black salsify, broccoli raab, carrot, celeriac (celery root), chicory, dasheen (taro), edible burdock, garden beet, hanover salad, oriental radish (daikon), parsnip, raab, raab salad, radish, rutabaga, sugar beet, sweet cassava, sweet potato, tanier, true yam, turnip, turnip-rooted chervil

Pests and Application Rates:

Pests	Transform WG (oz/acre)
Aphids	0.75 – 1.0 (0.023 – 0.031 lb ai/acre)
Leafhoppers	1.5 – 2.75 (0.047 – 0.086 lb ai/acre)
silverleaf whitefly sweetpotato whitefly	2.0 – 2.75 (0.063 – 0.086 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area. Two applications may be required for optimum control of whiteflies.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 8.5 oz of Transform WG (0.266 lb ai of sulfoxaflor) per acre per year.
- Do not apply this product at any time between 3 days prior to bloom and until after petal fall.

Ornamentals (Herbaceous and Woody) Growing Outdoors, in Nurseries (Including Conifer Seed Orchards), or in Greenhouses
(Non-residential use only)

Pests and Application Rates:

Pests	Transform WG (oz/gal)	Transform WG (oz/100 gal)	Transform WG (oz/acre)
aphids, such as: green peach aphid rose aphid	0.008	0.8	1.5 (0.047 lb ai/acre)
mealybugs, such as: mealybug, juniper mealybug, maple mealybug, taxus others scales, such as: carnelia scale euonymus scale fletcher scale pine needle scale others whiteflies, such as: greenhouse whitefly silverleaf whitefly	0.013	1.4	2.25 – 2.75 (0.071 – 0.086 lb ai/acre)

Advisory Pollinator Statement: Notifying known beekeepers within 1 mile of the treatment area 48 hours before the product is applied will allow them to take additional steps to protect their bees. Also, limiting application to times when managed bees and native pollinators are least active, e.g., before 7 am or after 7 pm local time or when the temperature is below 55^{o}F at the site of application, will minimize risk to bees.

Application Method: Dilute Transform WG in water and apply using suitable hand- or power-operated application equipment (such as tractor-mounted, portable pump-up, backpack, hydraulic, boom) in a manner to provide complete and uniform plant coverage. Two applications may be required for optimum control of whiteflies.

Transform WG may be aerially applied to commercially grown ornamentals only. Aerial or ground applications in product agriculture or directed ground applications to individual plants are permitted. Do not make aerial applications in immediate proximity of residential, commercial, government, institutional or other structures where people may be present including homes, apartments, offices, churches, schools, and businesses. Aerial applicators should evaluate conditions existing at the time of application and make appropriate adjustments to reduce drift. In urban areas, however, use is limited to directed ground applications.

Application Rate: Transform WG may be used up to a maximum labeled rate of 0.013 oz per gallon (1.4 oz per 100 gallons, 2.75 oz per acre) per application on trees and ornamentals as a general treatment

regardless of the target insect pest. Use pest specific rates when a single insect pest or group of insect pests within a rate category is the only intended target.

Spray Volume: Attempt to penetrate dense foliage, but avoid over spraying to the point of excessive runoff. Uniform coverage of both upper and lower leaf surfaces is critical for effective insect control.

Restrictions:
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than four applications per year.
- Do not make more than two consecutive applications.
-
- Do not apply more than a total of 8.5 oz of Transform WG (0.266 lb ai of sulfoxaflor) per acre per year.
- Do not make more than one application during bloom. The single application during bloom must not exceed a rate of 2.25 oz (0.071 lb/ai per acre).

Pineapple

Pests and Application Rates:

Pests	Transform WG (oz/acre)
mealybugs	1.5 – 2.75 (0.047 – 0.086 lb ai/acre)

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than two applications per acre per year.
- Do not apply more than a total of 5.5 fl oz of Transform WG (0.180lb ai of sulfoxaflor) per acre per year.
- Do not apply this product at any time between 3 days prior to bloom and until after petal fall.

Pome Fruits (Crop Group 11)[1]

[1]Pome fruits (crop group 11) including apples, crabapple, loquat, mayhaw, pears, quince

Pests and Application Rates:

Pests	Transform WG (oz/acre)
aphids white apple leafhopper	0.75 – 1.5 (0.023 - 0.047 lb ai/acre)
plant bugs woolly apple aphid	1.5 – 2.75 (0.047 – 0.086 lb ai/acre)
pear psylla (suppression only) San Jose scale (suppression only)	2.75 (0.086 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area. Time application for San Jose scale to the crawler stage.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 8.5 oz of Transform WG (0.266 lb ai of sulfoxaflor) per acre per year.
- Do not apply this product at any time between 3 days prior to bloom and until after petal fall.

Root and Tuber Vegetables (Crop Groups 1A and 1B)[1]

[1]Root and tuber vegetables (crop group 1) including bitter black salsify, carrot, celeriac, chayote (root), chicory, chufa, daikon, dasheen, edible burdock, garden beet, ginseng, horseradish, lobok, lo pak, oriental radish, parsnip, radish, red Chinese radish, red Japanese radish, rutabaga, salsify, skirret, Spanish salsify, sugar beet, turnip, turnip-rooted chervil, turnip-rooted parsley, white Chinese radish, white Japanese radish, winter radish, and other cultivars or hybrids of these

Pests and Application Rates:

Pests	Transform WG (oz/acre)
Aphids	0.75 – 1.5 (0.023 – 0.047 lb ai/acre)
Leafhoppers	1.5 – 2.75 (0.047 – 0.086 lb ai/acre)
silverleaf whitefly sweetpotato whitefly	2.0 – 2.75 (0.063 – 0.086 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area. Two applications may be required for optimum control of whiteflies.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 8.5 oz of Transform WG (0.266 lb ai of sulfoxaflor) per acre per year.
- Do not apply this product at any time between 3 days prior to bloom and until after petal fall.

Potatoes (Crop Groups 1C and 1D)[1]

[1]Root and tuber vegetables (crop group 1) including arracacha, arrowroot, bitter black salsify, bitter cassava, chayote (root), Chinese artichoke, chufa, daikon, dasheen, edible canna, ginger, Jerusalem

artichoke, leren, lobok, lo pak, potato, radish, sweet cassava, sweet potato, tanier, true yam, turmeric, yam, yam bean, and other cultivars or hybrids of these

Pests and Application Rates:

Pests	Transform WG (oz/acre)
aphids	0.75 – 1.5 (0.023 – 0.047 lb ai/acre)
Leafhoppers	1.5 – 2.25 (0.047 – 0.071 lb ai/acre)
Potato psyllid silverleaf whitefly sweetpotato whitefly	2.0 – 2.25 (0.063 – 0.071 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area. Two applications may be required for optimum control of whiteflies.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 8.5 oz of Transform WG (0.266 lb ai of sulfoxaflor) per acre per year.

Small Fruit Vine Climbing (Except Fuzzy Kiwifruit) (Subgroup 13-07F)[1] and Low Growing Berry (Subgroup 13-07G)[2] except Strawberry

[1]Small fruit vine climbing (except fuzzy kiwifruit) (subgroup 13-07F) including amur river grape, gooseberry, grape, hardy kiwifruit, maypop, schisandra berry, and cultivars, varieties and/or hybrids of these

[2]Low growing berry (subgroup 13-07G) including bearberry, bilberry, lowbush blueberry, cloudberry, cranberry, lingonberry, muntries, partridgeberry, and cultivars, varieties and/or hybrids of these

Pests and Application Rates:

Pests	Transform WG (oz/acre)
grape leafhopper mealybugs plant bugs	1.5 – 2.75 (0.047 – 0.086 lb ai/acre)
thrips (suppression only)	2.75 (0.086 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 7 days of harvest of small fruit vine climbing (except fuzzy kiwifruit) and within 1 day of harvest of low growing berry.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 8.5 oz of Transform WG (0.266 lb ai of sulfoxaflor) per acre per year.
- Do not apply this product at any time between 3 days prior to bloom and until after petal fall.

Strawberry

Pests and Application Rates:

Pests	Transform WG (oz/acre)
plant bugs	1.5 – 2.25 (0.047 – 0.071 lb ai/acre)
thrips (suppression only)	2.25 (0.071 lb ai/acre)

Advisory Pollinator Statement: Notifying known beekeepers within 1 mile of the treatment area 48 hours before the product is applied will allow them to take additional steps to protect their bees. Also, limiting application to times when managed bees and native pollinators are least active, e.g., before 7 am or after 7 pm local time or when the temperature is below 55°F at the site of application, will minimize risk to bees.

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 8.5 oz of Transform WG (0.266 lb ai of sulfoxaflor) per acre per year.

Soybean

Pests and Application Rates:

Pests	Transform WG (oz/acre)
soybean aphid	0.75 – 1.0 (0.023 – 0.031 lb ai/acre)
Suppression only: brown stink bug southern green stink bug	2.0 – 2.25 (0.063 – 0.071 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural

experiment station for any additional local use recommendations for your area.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 7 days of grain, forage or hay harvest.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 8.5 oz of Transform WG (0.266 lb ai of sulfoxaflor) per acre per year.
- No more than two applications may be made to soybean forage.

Stone Fruits (Crop Group 12)[1]

[1]Stone fruits (crop group 12) including apricot, nectarine, peach, plum, prune, sweet cherry, tart cherry

Pests and Application Rates:

Pests	Transform WG (oz/acre)
aphids	0.75 – 1.5 (0.023 - 0.047 lb ai/acre)
San Jose scale (suppression only) western flower thrips (suppression only)	2.75 (0.086 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area. Time application for San Jose scale to the crawler stage.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 8.5 oz of Transform WG (0.266 lb ai of sulfoxaflor) per acre per year.
- Do not apply this product at any time between 3 days prior to bloom and until after petal fall.

Succulent, Edible Podded and Dry Beans[1]

[1]Succulent, edible podded, and dry beans including adzuki bean, asparagus bean, bean, blackeyed pea, broad bean, chickpea, Chinese longbean, cowpea, fava bean, field bean, garbanzo bean, grain lupine, green lima bean, jackbean, kidney bean, lablab bean, lima bean, moth bean, mung bean, navy bean, pinto bean, rice bean, runner bean, snap bean, soybean (immature seed), sweet lupine, sword bean, tepary bean, wax bean, white lupine, white sweet lupine, yardlong bean

Pests and Application Rates:

Pests	Transform WG (oz/acre)
aphids	0.75 – 1.0 (0.023 – 0.031 lb ai/acre)

plant bugs	1.5 – 2.25 (0.047 – 0.071 lb ai/acre)
Suppression only: brown stink bug southern green stink bug	2.0 – 2.25 (0.063 – 0.071 lb ai/acre)
thrips (suppression only)	2.25 (0.071 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 8.5 oz of Transform WG (0.266 lb ai of sulfoxaflor) per acre per year.

Tree Nuts (Crop Group 14)[1] and Pistachio

[1]Tree nuts (crop group 14) including almonds, cashew, chestnut, filbert (hazelnut), macadamia nut, pecan, walnut

Pests and Application Rates:

Pests	Transform WG (oz/acre)
aphids	0.75 – 1.5 (0.023 - 0.047 lb ai/acre)
San Jose scale (suppression only)	2.75 (0.086 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area. Time application for San Jose scale to the crawler stage.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 8.5 oz of Transform WG (0.266 lb ai of sulfoxaflor) per acre per year.
- Do not apply this product at any time between 3 days prior to bloom and until after petal fall.

Turfgrass

(For application only to commercial sod farms and grass grown for seed)

Pests and Application Rates:

Pests	Transform WG (oz/acre)
aphids (greenbug)	1.5 (0.047 lb ai/acre)
chinch bugs (suppression only)	2.75 (0.086 lb ai/acre)

Application Method: Dilute Transform WG in water and apply using suitable hand- or power-operated application equipment (such as tractor-mounted, portable pump-up, backpack, hydraulic, boom, turf "spray gun") in a manner to provide complete and uniform plant coverage.

Restrictions:
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 8.5 oz of Transform WG (0.266 lb ai of sulfoxaflor) per acre per year.
- Do not feed treated grass cuttings (hay) or seed screenings to livestock or use hay for livestock bedding.
- Do not apply to golf courses, parks, playgrounds, athletic fields, or residential lawns.
- Do not make aerial applications to turfgrass.
-

Terms and Conditions of Use

If terms of the following Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid. Otherwise, use by the buyer or any other user constitutes acceptance of the terms under Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies.

Warranty Disclaimer

Dow AgroSciences warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. Dow AgroSciences MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

Inherent Risks of Use

It is impossible to eliminate all risks associated with use of this product. Plant injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperature, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Dow AgroSciences or the seller. To the extent consistent with applicable law all such risks shall be assumed by buyer.

Limitation of Remedies

To the extent permitted by law, the exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at Dow AgroSciences' election, one of the following:

1. Refund of purchase price paid by buyer or user for product bought, or
2. Replacement of amount of product used

Dow AgroSciences shall not be liable for losses or damages resulting from handling or use of this product unless Dow AgroSciences is promptly notified of such loss or damage in writing. In no case shall Dow AgroSciences be liable for consequential or incidental damages or losses.

The terms of the Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of Dow AgroSciences or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or Limitation of Remedies in any manner.

EPA accepted __/__/__

List of Supplemental Labels

Supplemental Name	EPA Approval Date
For control or suppression of aphids and plant bugs in alfalfa and other non-grass animal feeds (Crop Group 18)[1]: [1]Including Alfalfa, alfalfa grown for seed, clover, velvetbean, vetch	New; pending review/approval
For control or suppression of aphids in Barley, Buckwheat, Oats, Rye, Teff, Triticale and Wheat	New; pending review/approval
For control or suppression of aphids in cacao	New; pending review/approval
For control or suppression of aphids in corn	New; pending review/approval
For control or suppression of mealybugs in pineapple	New; pending review/approval

Supplemental Labeling

Dow AgroSciences

Dow AgroSciences LLC 9330 Zionsville Road Indianapolis, IN 46268-1054 USA

Transform® WG

EPA Reg. No. 62719-625

For control or suppression of aphids and plant bugs in alfalfa and other non-grass animal feeds (Crop Group 18)[1]:

[1]Including Alfalfa, alfalfa grown for seed, clover, velvetbean, vetch

ATTENTION

- It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
- This labeling must be in the possession of the user at the time of application.
- Read the label affixed to the container for Transform® WG insecticide before applying. Carefully follow all precautionary statements and applicable use directions.
- Use of Transform WG according to this supplemental labeling is subject to all use precautions and limitations imposed by the label affixed to the container for Transform WG.

Directions for Use

Refer to product label for General Use Precautions, Mixing and Application instructions.

Pests and Application Rates:

Pests	Transform WG (oz/acre)
aphids	0.75 – 1.0 (0.023 – 0.031 lb ai/acre)
Tarnished plant bug Western tarnished plant bug	1.5 – 2.75 (0.047 – 0.086 lb ai/acre)

Advisory Pollinator Statement: Notifying known beekeepers within 1 mile of the treatment area 48 hours before the product is applied will allow them to take additional steps to protect their bees.

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural

experiment station for any additional local use recommendations for your area.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
- **Preharvest Interval:** Do not apply within 7 days of grazing, or forage, fodder, or hay harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than two applications per cutting.
- Do not apply more than a total of 8.5 oz of Transform WG (0.266 lb ai of sulfoxaflor) per acre per year.

Note: This product is highly toxic to bees exposed through contact during spraying and while spray droplets are still wet. This product may be toxic to bees exposed to treated foliage for up to 3 hours following application. Toxicity is reduced when spray droplets are dry. Refer to the Environmental Hazards section of the product label attached to the product container for required protective measures.

R396-010
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Supplemental Labeling

Dow AgroSciences

Dow AgroSciences LLC 9330 Zionsville Road Indianapolis, IN 46268-1054 USA

Transform® WG

EPA Reg. No. 62719-625

For control or suppression of aphids in Barley, Buckwheat, Oats, Rye, Teff, Triticale and Wheat

ATTENTION

- It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
- This labeling must be in the possession of the user at the time of application.
- Read the label affixed to the container for Transform® WG insecticide before applying. Carefully follow all precautionary statements and applicable use directions.
- Use of Transform WG according to this supplemental labeling is subject to all use precautions and limitations imposed by the label affixed to the container for Transform WG.

Directions for Use

Refer to product label for General Use Precautions, Mixing and Application instructions.

Pests and Application Rates:

Pests	Transform WG (oz/acre)
aphids greenbug	0.5 – 0.75 (0.016 – 0.023 lb ai/acre)
Russian wheat aphid	0.75 – 1.5 (0.023 - 0.047 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:

- **Preharvest Interval:** Do not apply within 14 days of grain or straw harvest or within 7 days of grazing, or forage, fodder, or hay harvest.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than two applications per crop.
- Do not apply more than a total of 2.8 oz of Transform WG (0.09 lb ai of sulfoxaflor) per acre per year.

Note: This product is highly toxic to bees exposed through contact during spraying and while spray droplets are still wet. This product may be toxic to bees exposed to treated foliage for up to 3 hours following application. Toxicity is reduced when spray droplets are dry. Refer to the Environmental Hazards section of the product label attached to the product container for required protective measures.

R396-014
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Supplemental Labeling

Dow AgroSciences

Dow AgroSciences LLC 9330 Zionsville Road Indianapolis, IN 46268-1054 USA

Transform® WG

EPA Reg. No. 62719-625

For control or suppression of aphids in cacao

ATTENTION

- It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
- This labeling must be in the possession of the user at the time of application.
- Read the label affixed to the container for Transform® WG insecticide before applying. Carefully follow all precautionary statements and applicable use directions.
- Use of Transform WG according to this supplemental labeling is subject to all use precautions and limitations imposed by the label affixed to the container for Transform WG.

Directions for Use

Refer to product label for General Use Precautions, Mixing and Application instructions.

Pests and Application Rates:

Pests	Transform WG (oz/acre)
Black citrus aphid	1.2 (0.038 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:

- **Preharvest Interval:** Do not apply within 3 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 28 days apart.
- Do not make more than four applications per crop.
- Do not apply more than a total of 4.8 oz of Transform WG (0.14 lb ai of sulfoxaflor) per acre per year.

Note: This product is highly toxic to bees exposed through contact during spraying and while spray droplets are still wet. This product may be toxic to bees exposed to treated foliage for up to 3 hours following application. Toxicity is reduced when spray droplets are dry. Refer to the Environmental Hazards section of the product label attached to the product container for required protective measures.

R396-011
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Supplemental Labeling

Dow AgroSciences

Dow AgroSciences LLC 9330 Zionsville Road Indianapolis, IN 46268-1054 USA

Transform® WG

EPA Reg. No. 62719-625

For control or suppression of aphids in Corn (Field, Sweet, Seed, and Popcorn), Millet, Sorghum and Teosinte

ATTENTION

- It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
- This labeling must be in the possession of the user at the time of application.
- Read the label affixed to the container for Transform® WG insecticide before applying. Carefully follow all precautionary statements and applicable use directions.
- Use of Transform WG according to this supplemental labeling is subject to all use precautions and limitations imposed by the label affixed to the container for Transform WG.

Directions for Use

Refer to product label for General Use Precautions, Mixing and Application instructions.

Pests and Application Rates:

Pests	Transform WG (oz/acre)
aphids	0.75 – 1.5 (0.023 – 0.047 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:
Sweet Corn

- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than two applications per acre per year.
- Do not apply more than a total of 3.0 oz of Transform WG (0.09 lb ai of sulfoxaflor) per acre per year.

Field Corn, Seed Corn and Popcorn, Millet, Sorghum and Teosinte

- **Preharvest Interval:** Do not apply within 7 days of harvest for forage, and 14 days for grain or stover.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than two applications per acre per year.
- Do not apply more than a total of 3.0 oz of Transform WG (0.09 lb ai of sulfoxaflor) per acre per year.

Note: This product is highly toxic to bees exposed through contact during spraying and while spray droplets are still wet. This product may be toxic to bees exposed to treated foliage for up to 3 hours following application. Toxicity is reduced when spray droplets are dry. Refer to the Environmental Hazards section of the product label attached to the product container for required protective measures.

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Supplemental Labeling

Dow AgroSciences

Dow AgroSciences LLC 9330 Zionsville Road Indianapolis, IN 46268-1054 USA

Transform® WG

EPA Reg. No. 62719-625

For control or suppression of mealybugs in pineapple

ATTENTION

- It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
- This labeling must be in the possession of the user at the time of application.
- Read the label affixed to the container for Transform® WG insecticide before applying. Carefully follow all precautionary statements and applicable use directions.
- Use of Transform WG according to this supplemental labeling is subject to all use precautions and limitations imposed by the label affixed to the container for Transform WG.

Directions for Use

Refer to product label for General Use Precautions, Mixing and Application instructions.

Pests and Application Rates:

Pests	Transform WG (oz/acre)
mealybugs	1.5 – 2.75 (0.047 – 0.086 lb ai/acre)

Application Rate: Use a higher rate in the rate range for heavy pest populations.

Restrictions:

- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than two applications per acre per year.
- Do not apply more than a total of 5.5 fl oz of Transform WG (0.180lb ai of sulfoxaflor) per acre per year.
- Do not apply this product at any time between 3 days prior to bloom and until after petal fall.

Note: This product is highly toxic to bees exposed through contact during spraying and while spray droplets are still wet. This product may be toxic to bees exposed to treated foliage for up to 3 hours following application. Toxicity is reduced when spray droplets are dry. Refer to the Environmental Hazards section of the product label attached to the product container for required protective measures.

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3. SECTION C: FULL REPORTS OF INVESTIGATIONS MADE WITH RESPECT TO THE SAFETY OF THE PESTICIDE CHEMICAL

Please refer to attached data matrices for:

Sulfoxaflor Technical	EPA Reg. No. 62719-631
Closer SC	EPA Reg. No. 62719-623
Transform WG	EPA Reg. No. 62719-625

To access the following safety data:

a) Human safety data
b) Domestic animal safety data
c) Fish and wildlife safety data

4. SECTION D: RESULTS OF TESTS ON THE AMOUNT OF RESIDUE REMAINING ON CROPS

The residue data in support of the proposed tolerance levels for sulfoxaflor proposed for Corn, field, Corn, sweet, Corn, pop, Sorghum, grain, Cacao, bean, Pineapple, Alfalfa, Clover and Processed Fractions were generated from magnitude of residue studies conducted from 2011-2012. Please refer to the table below for studies submitted in support of this petition and to attached data matrices for results of previously submitted residue tests in or on a wide variety of crops.

List of studies being submitted with and to support tolerance levels for Corn, field, Corn, sweet, Corn, pop, Sorghum, grain, Cacao, bean, Pineapple, Alfalfa, Clover and Processed Fractions:

Guideline Reference #	Guideline Study Name	MRID #	Submitter	Status
Sulfoxaflor Technical				
860.1000	Background	49146301	62719	OWN
860.1500	Crop Field Trials	49146301	62719	OWN
N/A	XDE-208: Mode Of Action Evaluation And Human Relevance Framework Analysis For XDE-208-Induced Fetal Abnormalities And Neonatal Death In Rats	49146307	62719	OWN
N/A	XDE-208: Characterization of the Agonist Effects of XDE-208 on Mammalian Muscle Nicotinic Acetylcholine Receptors by Fluorescence-Based Intracellular Calcium Assay	49146308	62719	OWN
N/A	Addendum to NS000108: Analysis of Responses to 1mM XDE-208 in the FLIPR Assay	49146309	62719	OWN
Closer SC				
860.1000	Background	49146303	62719	OWN
860.1500	Crop Field Trials	49146302	62719	OWN
860.1500	Crop Field Trials	49146303	62719	OWN
860.1520	Processed Food/Feed	49146302	62719	OWN
860.1520	Processed Food/Feed	49146303	62719	OWN

Guideline Reference #	Guideline Study Name	MRID #	Submitter	Status
Transform WG				
860.1000	Background	49146304	62719	OWN
860.1000	Background	49146305	62719	OWN
860.1000	Background	49146306	62719	OWN
860.1500	Crop Field Trials	49146304	62719	OWN
860.1500	Crop Field Trials	49146305	62719	OWN
860.1500	Crop Field Trials	49146306	62719	OWN
860.1520	Processed Food/Feed	49146305	62719	OWN

SUMMARY

(In accordance with 40 CFR Part 152, this summary is available for public release after registration.)

STUDY TITLE

Sulfoxaflor US Tolerance Proposal on Corn, field, Corn, sweet, Corn, pop, Sorghum, grain, Cacao, bean, Pineapple, Alfalfa, Clover and Processed Fractions: Sections E, F and G of the Petition for Permanent Tolerances

DATA REQUIREMENTS

OPPTS: 860.1550-1560

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STUDY COMPLETION DATE

01-November-2013

PERFORMING LABORATORY

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Indianapolis, Indiana 46268

STUDY NUMBER

131194

Sulfoxaflor US Tolerance Proposal on Corn, field, Corn, sweet, Corn, pop, Sorghum, grain, Cacao, bean, Pineapple, Alfalfa, Clover and Processed Fractions: Sections E, F and G of the Petition for Permanent Tolerances

SUMMARY

Tolerances are proposed for the insecticide, sulfoxaflor: 1-(6-trifluoromethylpyridin-3-yl)ethyl](methyl)-oxido-λ4-sulfanylidenecyanamide, formerly XDE-208, expressed as parent in or on corn, field, grain at 0.015 parts per million; corn, field, forage at 0.5 ppm; corn, field, stover at 0.8 ppm; corn, sweet, at 0.01 ppm; corn, sweet, forage at 0.6 ppm; corn, sweet, stover at 0.7 ppm; corn, pop at 0.015 ppm; corn, pop, stover at 0.8 ppm; teosinte, grain at 0.015 ppm; sorghum, grain at 0.3 ppm;, sorghum, forage at 0.4 ppm; sorghum, stover at 0.9 ppm; millet, grain at 0.3 ppm; millet, forage at 0.4 ppm; cacao bean, dried bean at 0.15 ppm; pineapple at 0.09 ppm; alfalfa, seed at 30 ppm;, alfalfa, forage at 7 ppm; alfalfa, hay at 20 ppm; alfalfa, silage at 9 ppm; clover forage at 15 ppm; clover hay at 20 ppm; clover silage at 8 ppm; animal feed, nongrass, group 18, forage at 15 ppm; animal feed, nongrass, group 18, hay at 20 ppm; animal feed, nongrass, group 18, silage at 9 ppm; buckwheat, grain at 0.08 ppm; buckwheat, forage at 1 ppm; buckwheat, hay at 1.5 ppm; buckwheat, straw at 2 ppm; triticale, grain at 0.08 ppm; triticale, forage at 1 ppm; triticale, hay at 1.5 ppm; triticale, straw at 2 ppm; rye, grain at 0.08 ppm; rye, forage at 1 ppm; rye, hay at 1.5 ppm; rye, straw at 2 ppm; teff, grain at 0.08 ppm; teff, forage at 1 ppm; teff, hay at 1.5 ppm; teff, straw at 2 ppm; oat, grain at 0.4 ppm; oat, hay at 1 ppm; oat, straw at 2 ppm.

Revised tolerances of parent, sulfoxaflor are also proposed for milk at 1 ppm; fat of cattle, goat, horse and sheep at 0.6 ppm; meat of cattle, goat, horse and sheep at 1 ppm; meat byproducts of cattle, goat, horse and sheep at 2.5 ppm; hog, fat at 0.04 ppm; hog, meat at 0.07 ppm; hog, meat byproducts at 0.2 ppm; egg at 0.08 ppm; poultry, meat at 0.09 ppm; poultry, fat at 0.03 ppm; and poultry, meat byproducts at 0.2 ppm.

Reasonable grounds in support of the proposed tolerances are based on results from magnitude of residue studies on crops or representative crops for extraoplation and on results from the feeding study conducted with laying hens as well as the feeding study conducted with lactating dairy cattle. The nature of residues in plants, ruminants and poultry are thoroughly characterized. The proposed new tolerances are adequate to cover the highest residue from the maximum label use of sulfoxaflor in additional agricultural crops and secondary residues in livestock. Analytical methods for measuring residues of sulfoxaflor are available for enforcing the proposed tolerances.

The Agency has selected an acute population adjusted dose (aPAD) for the general population, of 0.25 mg/kg/d and an acute dietary endpoint for Females 13-49 years of age of 0.06 mg/kg/d. A chronic population adjusted dose (cPAD) of 0.05 mg/kg/d was selected. These PADs are based on NOAELs from appropriate toxicity studies and an uncertainty factor of 100 for acute and chronic general population, and a 30-fold uncertainty factor in the case of acute dietary endpoint for Females 13-49 years of age. Proposed new maximum residue limits (MRLs), highest residue (HR), average residues and processing factors were calculated by DAS based on results of the residue program conducted by DAS. The residue of concern in food commodities is identified as parent sulfoxaflor alone.

The Agency determined environmental fate data indicate that use of sulfoxaflor is likely to result in different residue profiles in surface water and groundwater, namely that sulfoxaflor is likely to be the predominant residue in surface water and 11719747/X11519540 will predominate in groundwater. When the residue profiles are coupled with the toxicological database, it becomes apparent that the EDWCs for assessing acute dietary exposure for the general population, acute dietary exposure for women of child-bearing age, and chronic dietary exposure for all populations need to be addressed differently.

HED has determined that it is appropriate to combine residues of sulfoxaflor, X11719474, and X11519540 when assessing chronic exposure and, furthermore, there is sufficient evidence to adjust the assessment to account for the different potencies of the metabolites. Based on NOAELs in the 28-day oral toxicity studies in rats, the potencies of the metabolites, relative to

sulfoxaflor, are 0.3X for X11719474 and 10X for X11519540. To account for the relative toxicity, the EDWCs for each metabolite are multiplied by their respective potency factor.

Dietary exposures associated with the proposed uses of sulfoxaflor have been estimated using DEEM-FCID™ ver. 3.18, based on NHANES 2-day food consumption data for 2008-2008 and conservative assumptions. Acute dietary exposure was estimated for all of the standard, representative population groups in addition to an assessment for women of child-bearing age (females 13-49 years old), which is based on a different endpoint/point of departure and which includes a different set of assumptions regarding residues in drinking water than were used for the other groups. Consistent with the Agency's methodology in determining acute dietary exposure when sulfoxaflor achieved initial registration and assuming 100% crop treated, a Tier 1 acute dietary risk assessment used maximum residue values from field trials rather than tolerance-level residue estimates resulted in exposures at the 95th percentile (the appropriate level for a Tier 1 assessment) that range from 7.3% to 43.9% of the acute population-adjusted dose (aPAD), with the highest risk estimates being for children 1-2 years old.

Consistent with the Agency's methodology in determining chronic dietary exposure when sulfoxaflor achieved initial registration, the chronic assessment assumes residues at average values from field trials rather than maximum values, or tolerance level residues and 100% crop treated. A refined chronic dietary risk assessment resulted in an exposure of 13.5% of the cPAD for the general U.S. population and 56.6% of cPAD for children aged 1-2 years, the most highly exposed subpopulation. Acute and chronic dietary (food + water) exposures are below the aPAD and cPAD, respectively, for all subpopulations. Exposures below the aPAD and cPAD indicate a reasonable certainty of no harm associated with the proposed uses of sulfoxaflor.

In addition, FQPA concerns are addressed, and there is a reasonable certainty that no harm will result from aggregate exposure to residues of sulfoxaflor when used as directed on a variety of agricultural crops, including fruit and vegetable crops, and including secondary residues in livestock commodities that may occur as a result of livestock consumption of treated feed items.

STUDY TITLE

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DATA REQUIREMENTS

OPPTS: 860.1550-1560

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PERFORMING LABORATORY

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